FUJITSU

AIRSTAGE™

VRF

Variable
Refrigerant
Flow System

Heat Pump & Heat Recovery

CATALOGUE

FUJITSU GENERAL LIMITED

Creation of Com

Fujitsu General have been developing and manufacturing high quality and energy efficient products for more than 35 years. Using the latest Japanese technology and state of the art expertise, our products have been designed in accordance with our policy to “create the most comfortable environment” possible.

The AIRSTAGE™ series provides high energy savings, comfort, and reliability to the end user. The design, installation, and servicing were developed based on the concepts of high flexibility and simplicity. We offer an abundant VRF system lineup to match regional and customer needs by providing the best combination from low to high capacities and from giving priority to conserving installation space to giving priority to high efficiency.

Simultaneous Heating and Cooling System for Large Capacities

8HP-42HP

27 models

Space saving combination
8HP to 42HP / 18 models

Energy efficiency combination
20HP to 38HP / 9 models

AIRSTAGE™ VR-II

P34

Heating or Cooling System for Large Capacities

8HP-42HP

18 models

Space saving combination
8HP to 42HP / 15 models

Energy efficiency combination
24HP to 28HP / 3 models

AIRSTAGE™ V-II

P42

fort

Heat Pump
Design
for Small Capacities

4HP, 5HP, 6HP

3 models

AIRSTAGE™ J-IIS

P48

Heat Pump
Design
for Small Capacities

4HP, 5HP, 6HP

3 models

AIRSTAGE™ J-II

P52

CONTENTS

Our History 4
High Quality Development & Production Environment 6
AIRSTAGE™ New Products 8
AIRSTAGE™ Line-up 10
• Indoor units range 12
AIRSTAGE™ Support 14
Design Support Tool 16

AIRSTAGE™ SOLUTION

HIGH ENERGY EFFICIENCY 20
MORE COMFORT 22
HIGH RELIABILITY 24
DESIGN FLEXIBILITY 26
EASY INSTALLATION 28
EASY SERVICE & MAINTENANCE 30

AIRSTAGE™ SERIES

HEAT RECOVERY TYPE AIRSTAGE™ VR-II ... 34
HEAT PUMP TYPE AIRSTAGE™ V-II 42
HEAT PUMP TYPE AIRSTAGE™ J-IIS 48
HEAT PUMP TYPE AIRSTGAE™ J-II 52

INDOOR UNITS

Compact Cassette 58
Cassette 60
Low Static Pressure Duct/ Concealed Floor 62
Slim Duct / Slim Concealed Floor 64
Low / Medium Static Pressure Duct ... 66
High Static Pressure Duct 68
Floor/Ceiling 70
Ceiling 72
Wall mounted (EEV Internal / external) 74

CONTROL SYSTEMS

CONTROL SYSTEM OVERVIEW 80
WIRING SYSTEM 82
COMPARISON TABLE OF CONTROLLERS 83
• Individual Controller 84
• Centralized Controller 90
• Convertor / Adaptor 98
• Service & Maintenance Tool 102

Ventilation 108
Option 112
Reference 120

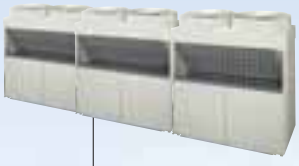
Our History

Overseas Air Conditioning Business since 1971
VRF Business since 2001

FUJITSU GENERAL's VRF AIRSTAGE™ Series has been developed based on our long-term air-conditioning technology know-how and was first provided 10 years ago. We have offered a series of products from large homes to large-scale buildings to meet the various market needs.

For Commercial Use

For Residential & Light Commercial Use



Established as Yaou Shouten Ltd.

Air conditioner exports to Middle East.

S series
10HP / Heat recovery & Heat pump

10HP / Heat recovery
8,10HP / Heat pump
& Cooling

J series
6HP / Heat pump

V series
8 to 42HP / Heat pump

AIRSTAGE™ History

1936 | 1971 | 1998 | 2001 | 2003 | 2004 | 2006

Certification Acquisition of

ISO14001

1998 : Fujitsu General (Shanghai) Co.,Ltd.
1999 : Fujitsu General (Thailand) co.,Ltd.
2002 : FGA (Thailand) Co.,Ltd.
2006 : Fujitsu General Central Air-conditioner (Wuxi) co.,Ltd.

AIRSTAGE™ V-II

V-II series
High efficiency and
Compact design model
Extensive lineup from 8HP to
48HP in 2HP increment /
Heat pump

P42

AIRSTAGE™ J-II

J-II series
High efficiency model
4HP to 6HP / Heat pump

P52

AIRSTAGE™ VR-II

VR-II series
High efficiency and
Compact design model
8 to 48HP / Heat Recovery

P34

AIRSTAGE™ J-IIS

J-IIS series
High efficiency model
4HP to 6HP / Heat pump

P48

2007 | 2009 | 2011 | 2012 | 2013 | 2014

New Product Initiatives
Fujitsu introduced inverter technology which used R410A refrigerant.

Refrigerant R410A

RoHS Compliant
Restriction of Hazardous Substances (ROHS) is an EU directive on the restriction of the use of certain hazardous substances in all consumer electrical and electronic equipment.

RoHS COMPLIANT

DC Inverter Compressors
Use of 100% inverter driven DC compressors.

ALL INVERTER

High Quality Development & Pr

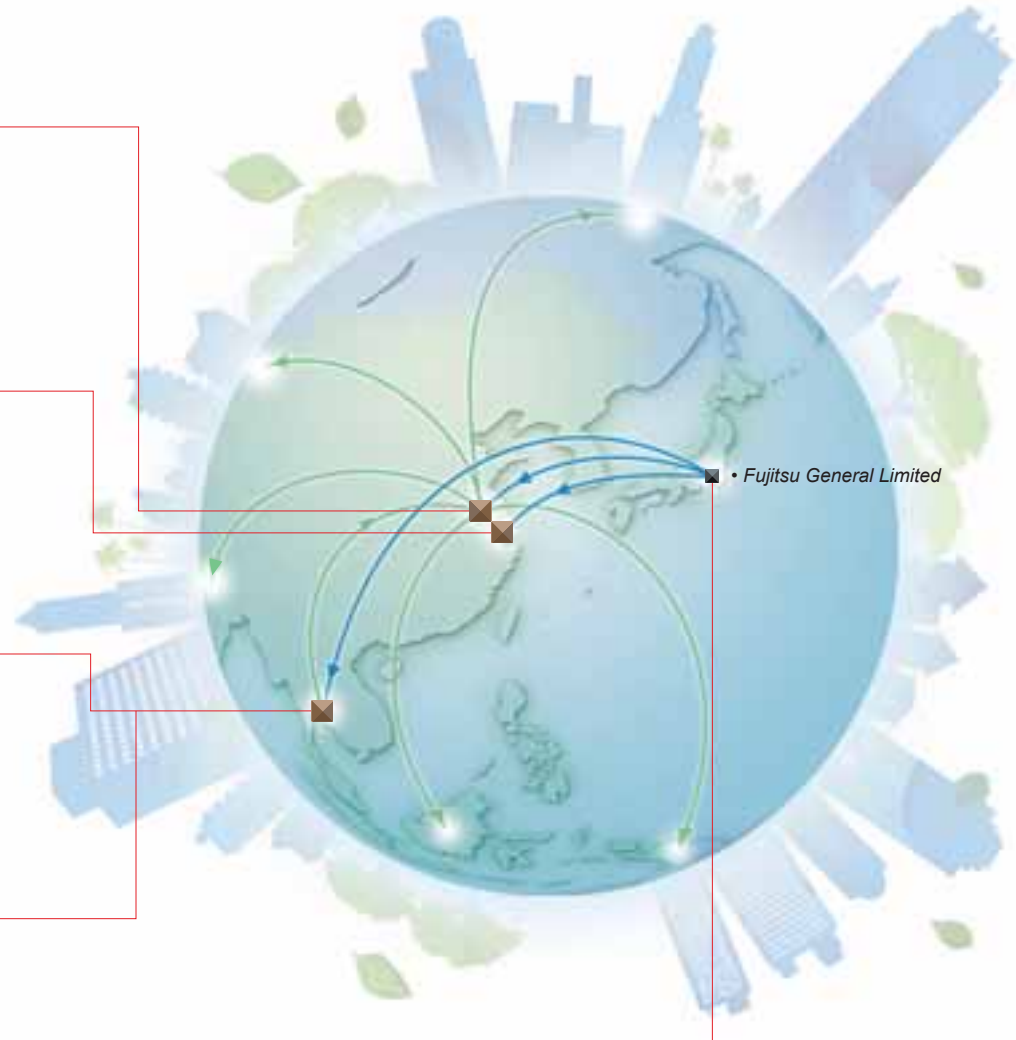
The Headquarters-R&D Center (Japan) is equipped with a wide range of testing equipment envisioning a variety of operating conditions. This includes a testing tower with a 60m height difference for buildings. We provide high quality & reliable products that meet the customers' needs from all over the world through this advanced R&D Center and 6 factories based in China and Thailand.

Fujitsu General Central
Air-conditioner (Wuxi) Co., Ltd.

Fujitsu General (Shanghai) Co., Ltd.

Fujitsu General (Thailand) Co., Ltd.
Fujitsu General Engineering (Thailand) Co., Ltd.

FGA (Thailand) Co., Ltd.



Certifications Acquisition of ISO 9001 and ISO14001 in each factory

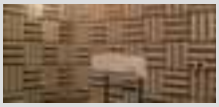
R&D Center in JAPAN

oduction Facilities

Advanced Research Facility and Equipment

Performance testing

Air flow testing



Sound testing

Calorimeter testing

Transportation & Handling

Vibration testing

Compressibility testing

Reliability Testing

Severe environmental testing

Water shower testing

Testing Laboratory

Fujitsu General EMC Laboratory Limited

International Test Site for EMC Regulation

60m Height Difference Testing Tower

Objective is to Confirm Oil Circulation of Compressor for Reliability

AIRSTAGE New Products

Small VRF system type

- Small and light weight design
- High seasonal energy efficiency
- Effective air intake grill design
- Adopting high performance twin rotary compressor
- Lineup from 4HP to 6HP

NEW AIRSTAGE™ J-IIS

User-friendly Wired Remote Controller

- Easy finger touch operation with LCD panel
- Backlight enable easy operation in a darkened room
- Corresponds to 7 different languages

Individual & Simple central control

Wired Remote Controller (Touch Panel)
UTY-RNRY

Flesh air ventilation

- 100% outdoor air intake possible
- Compact size and high static pressure 200 Pa (22.4 kW)
- High energy saving by adopting DC motor

Outdoor Air Unit: ARXH054GTAH / ARXH072GTAH / ARXH096GTAH

The heat pump method efficiently processes the outdoor air for cooling and heating and supplies 100% fresh air into a room.

ARXH054GTAH

ARXH072GTAH

ARXH096GTAH

AIRSTAGE Line-up

Fujitsu General provides multi air conditioning systems for buildings AIRSTAGE Series matched to the size and application of the property.

Heat Recovery type for simultaneous heating and cooling operation

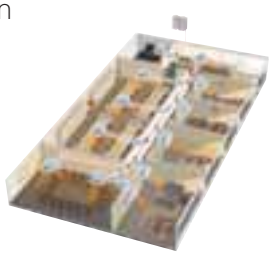
- Systems compatible with individual operation mode control, as well as large offices, hotels, and large composite facilities
- Extensive lineup from 8HP to 42HP increment connectable indoor unit capacity ratio up to 150%.
- Space saving and Energy efficiecy combinations 27models lineup.

AIRSTAGE™ VR-II

8HP - 42HP
27 models

Heat Pump type for heating or cooling operation

- Systems for large offices, hotels, and large composite facilities
- Extensive lineup from 8HP to 42HP increment connectable indoor unit capacity ratio up to 150%
- Space saving and Energy efficiecy combinations 18 models lineup



AIRSTAGE™ V-II

8HP - 42HP
18 models

Outdoor units range

HP		4	5	6	8	10	12	14	16	18	20	22
kW class		12.1	14.0	15.5	22.4	28.0	33.5	40.0	45.0	50.4	55.9	61.5
AIRSTAGE VR-II Heat Recovery	Space saving				AJTA72GALH	AJTA90GALH	AJT108GALH	AJT126GALH	AJT144GALH	AJT162GALH	AJT180GALH	AJT198GALH
	High Efficiency										AJT180GALHH	
AIRSTAGE V-II Heat Pump	Space saving				AJYA72LALH	AJYA90LALH		AJY126LALH	AJY144LALH	AJY162LALH	AJY180LALH	AJY198LALH
	High Efficiency											
NEW AIRSTAGE J-IIS Heat Pump	Space saving	AJT040LCLAH	AJT045LCLAH	AJT054LCLAH								
AIRSTAGE J-II Heat Pump	High Efficiency	AJYA36LALH	AJYA45LALH	AJYA54LALH								

Heat Pump type for heating or cooling operation

- Systems for large homes to medium sized offices, shops
- Small capacity range from 4HP to 6HP connectable indoor unit capacity ratio up to 130%
- Space saving design 3 models lineup

AIRSTAGE™ J-IIS

4HP, 5HP, 6HP

3 models

Heat Pump type for heating or cooling operation

- Systems for large homes to medium sized offices, shops
- Small capacity range from 4HP to 6HP connectable indoor unit capacity ratio up to 130%.
- Space saving design 3models lineup

AIRSTAGE™ J-II

4HP, 5HP, 6HP

3 models

24	26	28	30	32	34	36	38	40	42	44	46	48
67.0	73.5	78.5	85.0	90.0	95.0	100.5	107.0	112.0	118.5	123.5	130.0	135.0
AJT216GALH	AJT234GALH	AJT252GALH	AJT270GALH	AJT288GALH	AJT306GALH	AJT324GALH	AJT342GALH	AJT360GALH	AJT378GALH			
AJT216GALHH	AJT234GALHH	AJT252GALHH	AJT270GALHH	AJT288GALHH	AJT306GALHH	AJT324GALHH	AJT342GALHH					
AJY216LALH		AJY252LALH	AJY270LALH	AJY288LALH	AJY306LALH	AJY324LALH	AJY342LALH		AJY378LALH			
AJY216LALHH	AJY234LALHH	AJY252LALHH										

Indoor units range

Comprehensive range of indoor units of variety design and capacity ranges available which can be selected to suit any air conditioning needs.
12 types, 56 models, Capacity range from 2.2kW to 25.0kW

Capacity range (kW)		7	9	12	14	18	24
Model code		2.2	2.8	3.6	4.5	5.6	7.1
Cassette	Compact Cassette	AUXB07GALH	AUXB09GALH	AUXB12GALH	AUXB14GALH	AUXB18GALH	AUXB24GALH
	Cassette					AUXD18GALH	AUXD24GALH
Duct	Low Static Pressure Duct	ARXB07GALH	ARXB09GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH	ARXB24GALH
	Slim Duct (Drain pump internal)	ARXD07GALH	ARXD09GALH	ARXD12GALH	ARXD14GALH	ARXD18GALH	ARXD24GALH
	Medium Static Pressure Duct						ARXA24GALH
	High Static Pressure Duct						
Floor	Floor (Same as Ceiling models)			ABYA12GATH	ABYA14GATH	ABYA18GATH	ABYA24GATH
	Concealed Floor (Same as Low Static pressure Duct models)	ARXB07GALH	ARXB09GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH	
	Slim Concealed Floor (Same as Slim Duct models)	ARXD07GALH	ARXD09GALH	ARXD12GALH	ARXD14GALH	ARXD18GALH	ARXD24GALH
Ceiling	Ceiling			ABYA12GATH	ABYA14GATH	ABYA18GATH	ABYA24GATH
Wall Mounted	Wall Mounted	ASYA07GACH	ASYA09GACH	ASYA12GACH	ASYA14GACH	ASYA18GACH	ASYA24GACH
	Wall Mounted (EEV external)	ASYE07GACH	ASYE09GACH	ASYE12GACH	ASYE14GACH	With this model, connection of EV kit is necessary.	

Energy Recovery Ventilator range

Energy Recovery Ventilator provides fresh air to maintain a consistent indoor temperature & humidity, and creates more comfortable environment. 5 models

Airflow rate (m^3/h)	250	350	500	800	1000
Model code	025	035	050	080	100
Energy Recovery Ventilator	UTZ-BD025B	UTZ-BD035B	UTZ-BD050B	UTZ-BD080B	UTZ-BD100B

30	34	36	45	54	60	72	90
9.0	10.0	11.2	12.5	14.0	18.0	22.4	25.0
AUXA30GALH	NEW AUXA34GALH	AUXA36GALH	AUXA45GALH	AUXA54GALH			
ARXB30GALH		ARXB36GALH	ARXB45GALH				
ARXA30GALH		ARXA36GALH	ARXA45GALH				
		ARXC36GATH	ARXC45GATH		ARXC60GATH*	ARXC72GATH*	ARXC90GATH*
ABYA30GATH		ABYA36GATH	ABYA45GATH	ABYA54GATH			
ASYA30GACH							

*: ARXC60/72/90GATH cannot be connected to J-IIS series and J-II series.

Outdoor Air Unit range

The heat pump method efficiently processes the outdoor air for cooling and heating and supplies 100% fresh air into a room.

Airflow rate (m^3/h)	1080	1680	2100
Model code	054	072	096
Outdoor Air Unit	ARXH054GTAH	ARXH072GTAH	ARXH096GTAH

AIRSTAGE Support

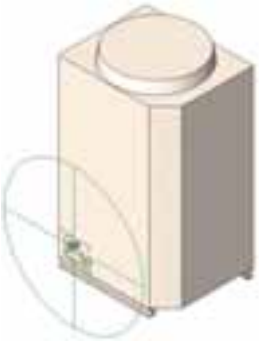
Fujitsu General provides a variety of product and technical information to engineers and consultants and also conducts new product research and design support activities.
We provide a wide range of support to maintain high quality from design to installation.

Technical Information

We provide information and tools that are useful for air conditioning system design, such as unit performance data and tools that make model selection and estimation easy.

Features

- Design & Technical Manual
- Model Selection & Estimation
- Certificate Data
- 2D/3D CAD Data



Product information

New product information is provided in the form of documents and movies for every new model released. These can be downloaded from a private section of our website. To access this website, please contact your Fujitsu representative.

Features

- Product News
- Brochures & All Manuals
- Feature Promotion Movie

Training

Fujitsu General has 7 training facilities around the world that regularly conduct specialized product, technical, and service training. These research facilities also support the development of people with high technical capability."

Features

- Designing Airstage Systems
- Control System on-site training

Training for installer

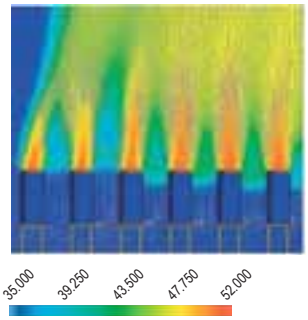
Presentation & training for dealers 2

Technical Support

Technical support is provided at every stage from design to installation to assist in providing the most suitable air conditioning solution.

Features

- CFD Simulation
- Guide line
- Commissioning Support



Design Support Tool

Design Simulator

Put the charts and pens away and design your projects on your computer with ease using the Design Simulator. Everything from selecting indoor and outdoor units, allocating controls and optional parts to designing the piping and wiring systems is made easier using the program's built-in features. Once your project is designed take advantage of the Export functions to easily get materials lists, product specifications, refrigerant calculations and more - it'll even export to Word or Excel formats, and group the relevant CAD data for your project.

Automatically create model selection information

- Each unit can be automatically set by entering the required performance, type, and temperature conditions for each indoor unit and then dragging and dropping into the outdoor unit.
- Piping and wiring diagrams can be created automatically and it is easy to set branches, grouping, and options.
- The additional refrigerant charging amount is automatically calculated when the pipe length is entered.
- It is also easy to set the remote controller groups, central controller and converters.
- The equipment list including the equipment information is created automatically.

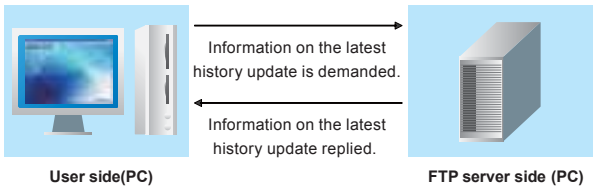
Output the format that matches the application

The information specific to your project can be exported in a number of industry standard file formats.

- Word format (rtf)
- Excel format (csv)
- Auto CAD format (DXF)
- 2D Data (DXF)
- 3D Data (RFA)

Update your Design Simulator

Database can be easily updated online using AutoUpdate function through FTP.

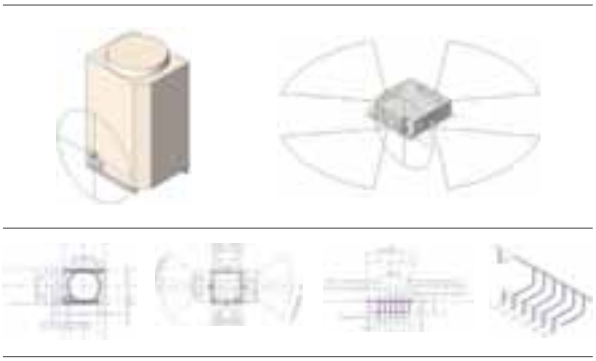


Building Information Modeling (BIM)

FUJITSU GENENRAL provides the Building Information Modeling (BIM) object models and contents for our VRF system and some products to the architect, designer and contractor using Autodesk® Revit® technology from our Website and Autodesk® Seek Website, etc.

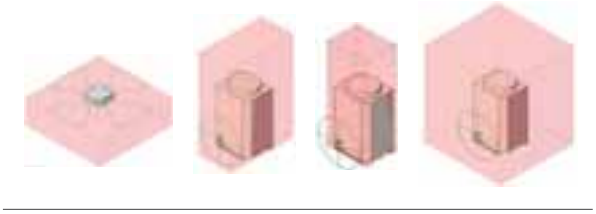
3D and 2D product data

We provide 3D data that closely resemble the actual product appearance. 2D CAD design operations are supported and 2D display is also provided.
The data can also be output in other formats, such as DXF and DWG, which are used by other design CAD.



Installation limitation

The equipment installation limitation range is shown. Installation requirements, such as distance from the wall, is automatically displayed to make it easy to produce highly reliable layout designs.



Installation information

Other information, such as symbols showing the airflow direction that are required for installation drawings, is built in and can be automatically reflected in 2D drawings. Installation drawings can be created easily.

Product specifications & Link information

Contains the basic information required for air conditioner design, including unit size, capacity, input power, noise, and airflow rate.

These data can be procured from the Fujitsu General Website, Design Simulator, and Autodesk® Seek Website.

AIRSTAGE™ SOLUTION

AIRSTAGE™ VRF SYSTEMS CAN BE DESIGNED TO CREATE AN AIR CONDITIONING SOLUTION TO SUIT MOST BUILDINGS REQUIREMENTS.

Airstage VRF Systems can be designed to effectively provide an air conditioning solution from a large domestic residence through to a large scale commercial building.

HIGH ENERGY EFFICIENCY

MORE COMFORT

HIGH RELIABILITY

DESIGN FLEXIBILITY

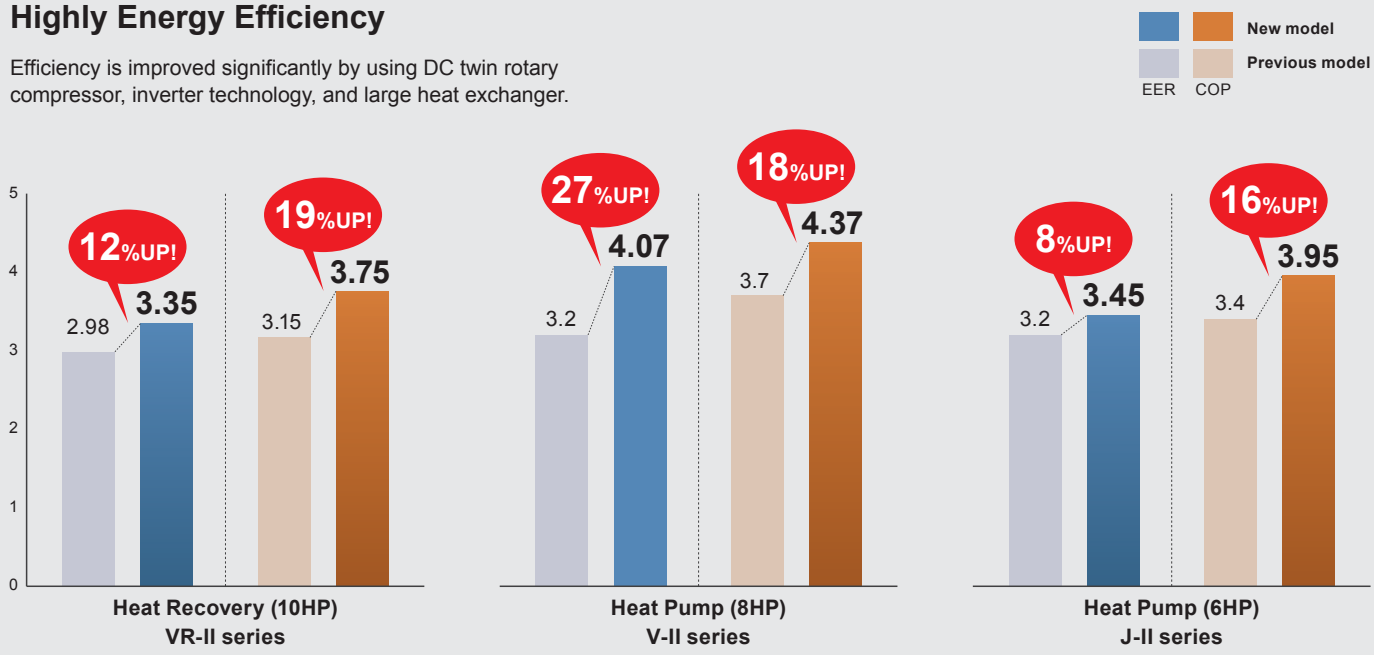
EASY INSTALLATION

EASY SERVICE & MAINTENANCE

HIGH ENERGY EFFICIENCY

Highly Energy Efficiency

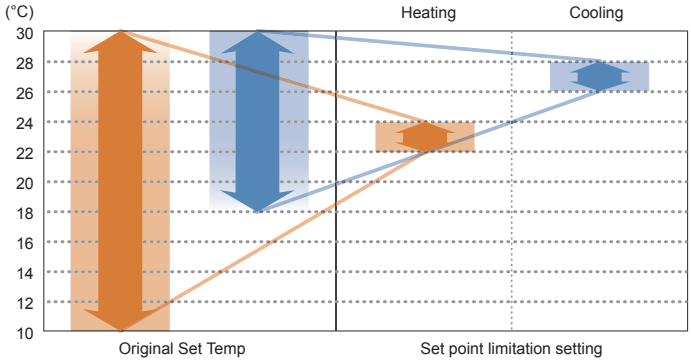
Efficiency is improved significantly by using DC twin rotary compressor, inverter technology, and large heat exchanger.



Operation Performance is Effectively Controlled.

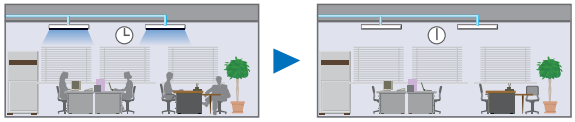
Room temperature set point limitation

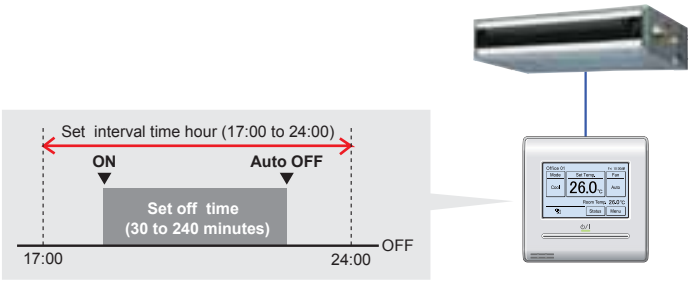
The minimum and maximum temperature ranges can be limited, which provide further energy saving while maintaining the comfort of the occupants.



Auto-off timer

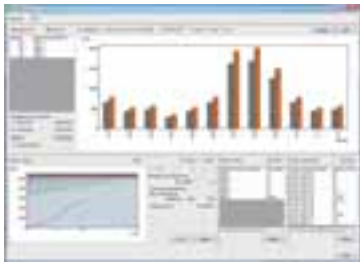
New wired remote controller is equipped with an OFF timer function that automatically stops operation when a fixed time has elapsed from the start of operation. This prevents waste of energy.
Furthermore a new wired remote controller can set up the interval of time in case operation stops.



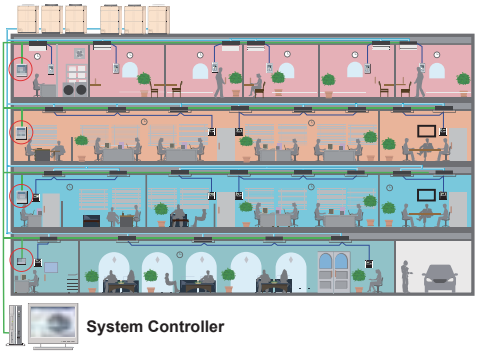


Energy saving management

A variety energy saving operations can be set and managed depending on the season, weather, and time period.
Excellent energy saving operation is performed by using System Controller.

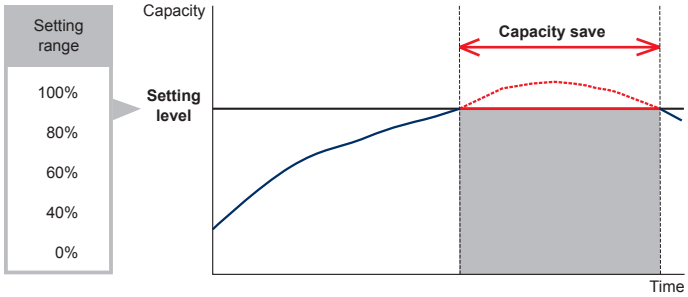


(Screen image is Energy manager software(Option))



Capacity save operation

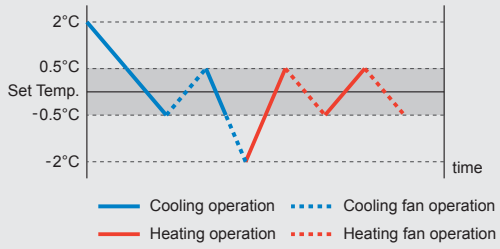
Operation capacity can be set in 5 steps for rated capability.
The power consumption at peak is cut down and the maximum load is suppressed.



MORE COMFORT

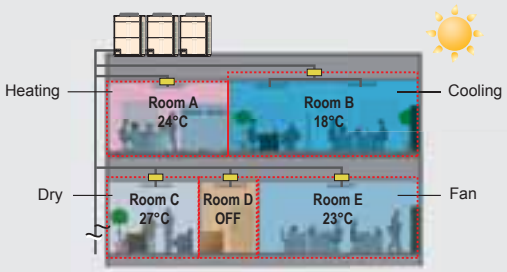
Auto changeover function

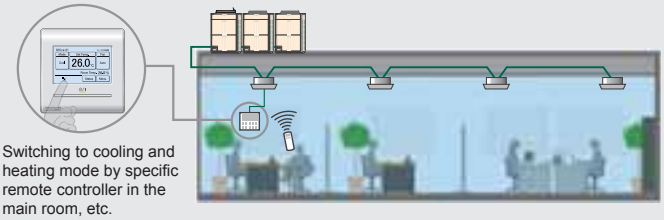
At Auto setting, the cooling/heating mode is automatically switched according to the set temperature and room temperature.



Auto changeover setting allows for the product to easily switch between cooling and heating modes regardless of the operation mode of other indoor units. This can be done via specific indoor unit with wired remote controller. This ensures comfortable operation all year round.

Automatic cooling / heating operation for each room is possible

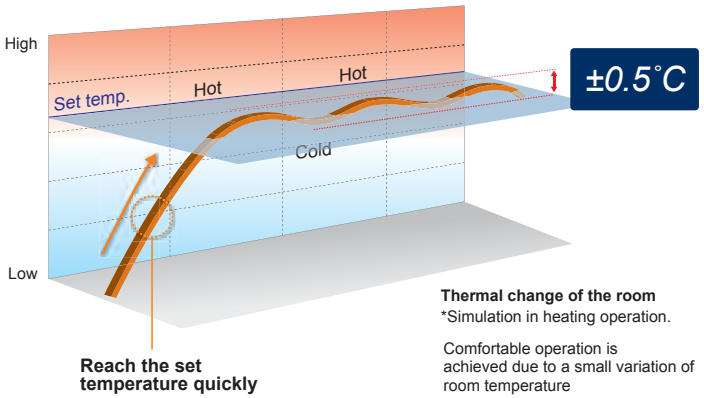




Switching to cooling and heating mode by specific remote controller in the main room, etc.

Precision refrigerant flow control

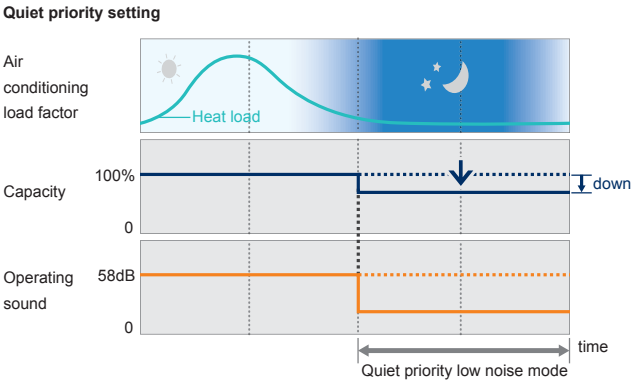
Precise and smooth refrigerant flow control is achieved by using a DC Inverter control in conjunction with individual indoor unit electronic expansion valve control. This allows high precision comfortable temperature control of ±0.5°C.

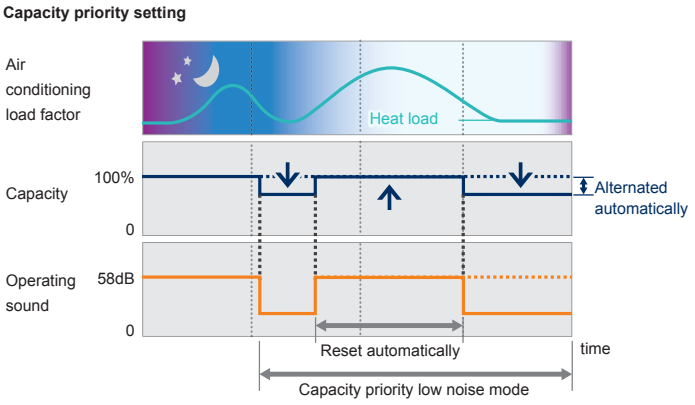


Quiet operation

Low noise mode

Two low noise modes can be selected automatically by quiet priority setting and capacity priority setting depending on the indoor environment and outside temperature load. This feature can be controlled via outdoor unit external input and/or system controller.

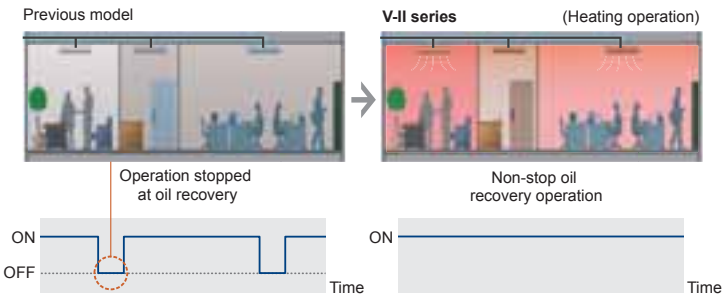




Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.

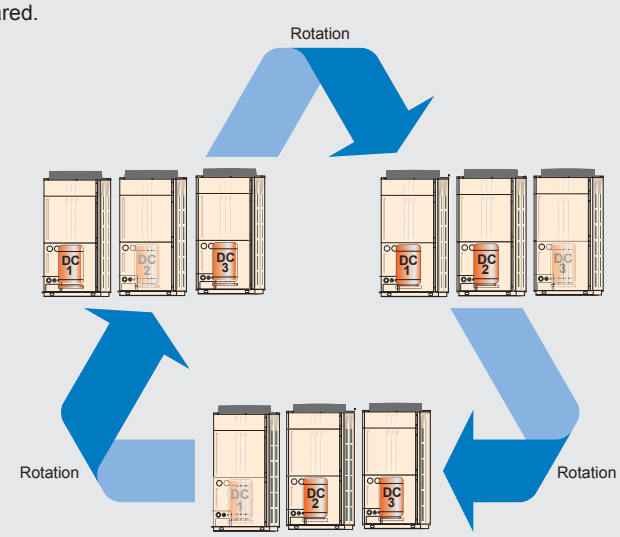
*: AIRSTAGE VR-II series is not available.



HIGH RELIABILITY

Outdoor unit rotational operation

The compressor starting order is rotated so that the running time is shared.

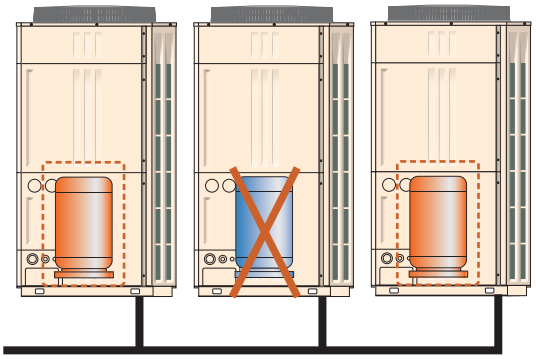


Note: Rotational operation is alternated by the start / stop timing of the compressor.

Backup operation

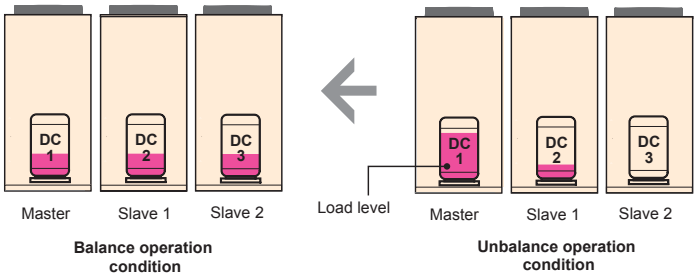
If one compressor fails, backup operation will be performed by the remaining compressors*.

*: Note: Backup operation may not be possible depending on the trouble state.



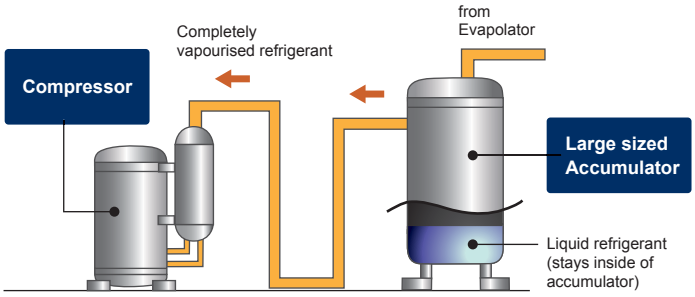
Advanced refrigerant control

Innovative compressor control logic has been introduced in order to balance the refrigerant mass flow rate of each outdoor unit by controlling the inverter speed.



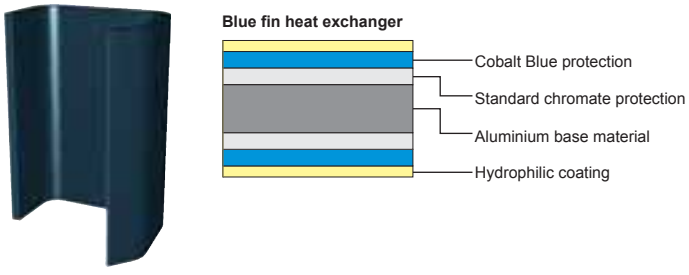
Liquid flow back protection

By adopting a large sized accumulator, the not completely vapourised refrigerant stays inside of the accumulator to ensure no liquid refrigerant is being fed into the compressor.



Adoption of blue fin heat exchanger

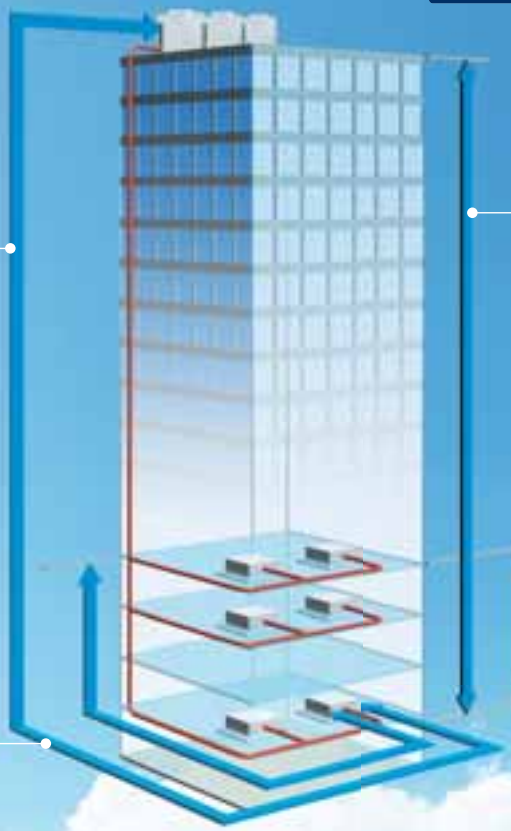
Corrosion resistant of the heat exchanger has been improved by the introduction of blue fin treatment to the outdoor unit's heat exchanger.



DESIGN FLEXIBILITY

Overall piping length 1,000m

Total pipe length
***1,000m* max.**



Actual pipe length
165m*

*: AIRSTAGE V-II series is up to 150m.

Height difference between outdoor and indoor units
***50m* max.**

For the outdoor unit stated below : 40m max. (Outdoor temp.≧-5°C)
5m max. (Outdoor temp.＜-5°C)

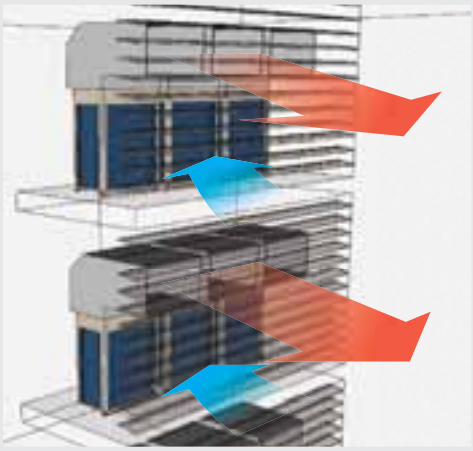
Height difference between indoor and indoor units
***15m* max.**

Pipe length from first separation tube to the farthest indoor unit
***60m* max.**

High static pressure of 80Pa

The outdoor unit can have a condenser hood easily connected with a static pressure of 80Pa standard.
This allows outdoor units to be installed within plant rooms in high rise buildings.

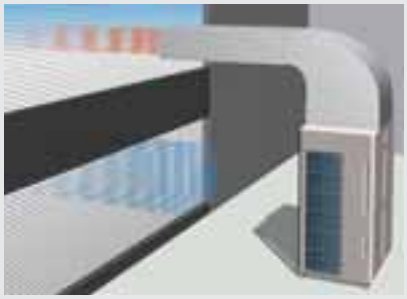
Powerful discharge air prevents a short-circuit.



80Pa
as standard

Previous model

V-II series



Large diameter fan and DC motor has been utilized allowing an external static pressure of 80Pa. This is approximately 2.6 times greater than the previous model.

High capacity connection

4HP-6HP

AIRSTAGE™ J-IIS series
Heat Pump type

Connectable indoor unit capacity range
50 % to 130%

Connectable indoor unit number
up to 8

8HP-42HP

AIRSTAGE™ VR-II series
Heat Recovery type

Connectable indoor unit capacity range
50 % to 150 %

Connectable indoor unit number
up to 64

AIRSTAGE™ V-II series
Heat Pump type

Connectable indoor unit capacity range
50 % to 150 %

Connectable indoor unit number
up to 48

4HP-6HP

AIRSTAGE™ J-II series
Heat Pump type

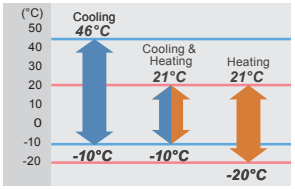
Connectable indoor unit capacity range
50 % to 130%

Connectable indoor unit number
up to 9

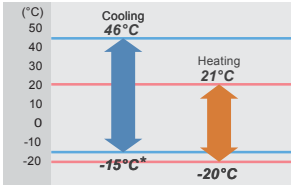
Wide operating range

Installation in extreme temperature conditions is possible due to an increase in operational range.

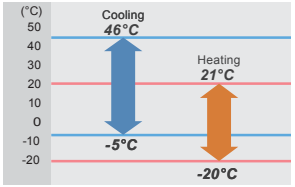
AIRSTAGE™ VR-II series
Heat Recovery type



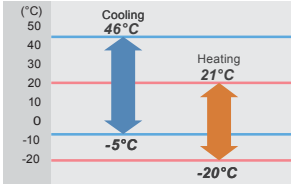
AIRSTAGE™ V-II series
Heat Pump type



AIRSTAGE™ J-IIS series
Heat Pump type



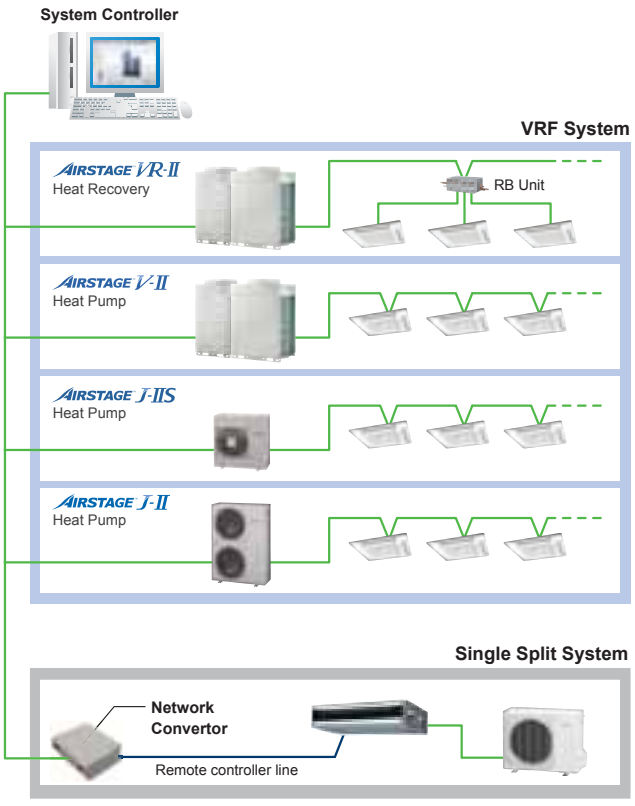
AIRSTAGE™ J-II series
Heat Pump type



* Note : When a multiple outdoor unit connection is used, operating range is from -5°C to 46°C in cooling.

Centralized control

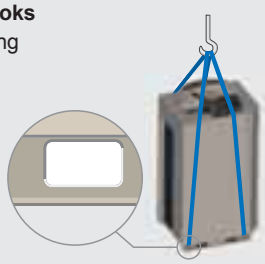
FGL split type air-conditioner can be connected to VRF Network via Network Convertor.
It is possible to manage the operation by using a FUJITSU VRF control system.



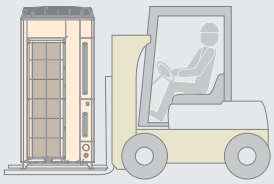
EASY INSTALLATION

Easily transported

Easily craned using lifting belt hooks
Design of outdoor unit allows for lifting straps to be used



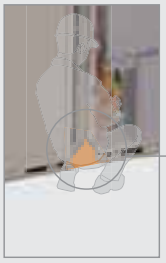
Transporting by forklift
Transport with forklift is possible.

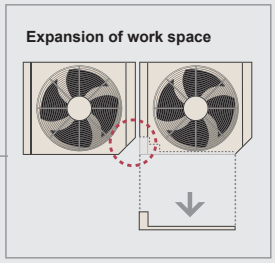


Can be transported in a small elevator

Easy access

By adopting a L-Shape front panel that can be removed, the work space for installation and service has been significantly expanded by this new design. For multiple installations, work is performed easily and efficiently even in a narrow space.

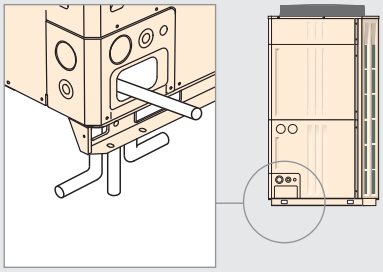




Reduced installation intervals by front access

Flexible piping connection

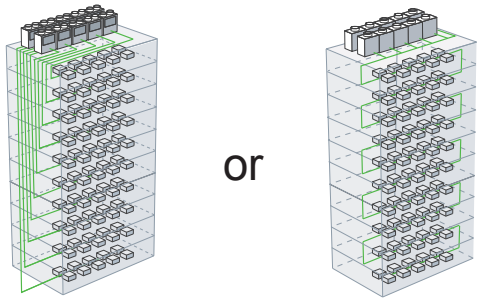
Piping and wiring are available to the front, left and right, and bottom.



Flexible installation by 4 way pipe direction

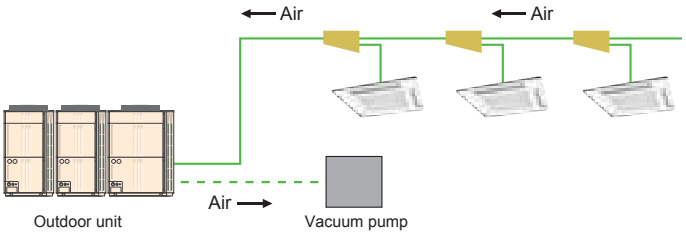
Simple wiring work

Installation of the wiring systems is made easier as the communication wiring can be installed continuously between the indoor, outdoor and RB units.



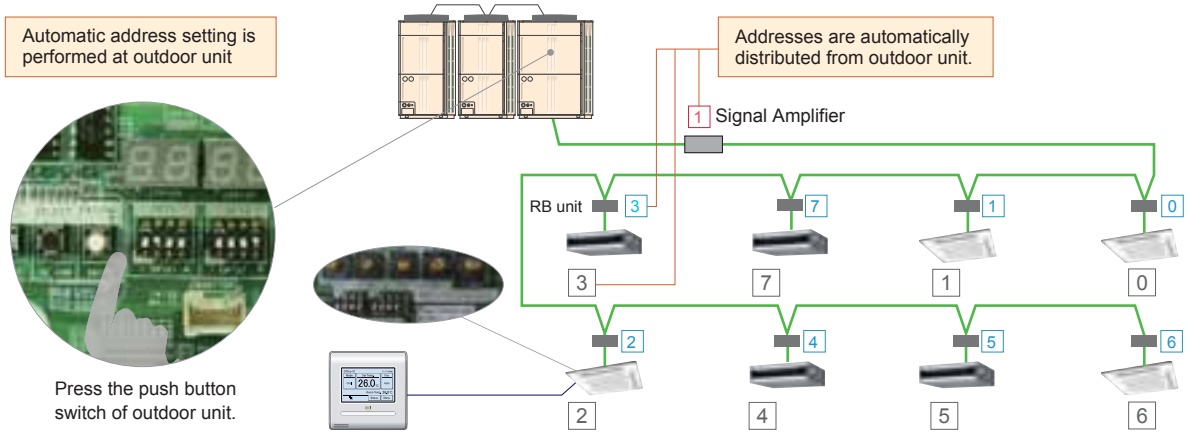
Easy evacuation - using vacuum mode function

The vacuum mode function enables all expansion valves of indoor units to be fully opened, making it easy to evacuate all the air inside pipe lines and indoor units.



Automatic address setting

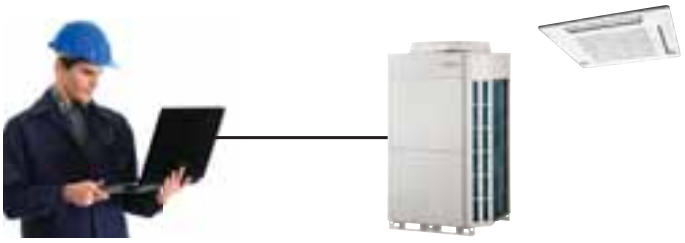
The address of the indoor unit, RB unit and signal amplifier can be set through the automatic function setting on the outdoor unit PCB.



Manual address setting from indoor unit and remote controller is also possible.

Easy commissioning by Service Tool

Service tools can be used to check the refrigerant temperature, pressure, and the operating status of the electronic expansion valve, making it easy to determine whether the units are connected properly.



EASY SERVICE & MAINTENANCE

Design for Easy Maintenance

7 segment LED is used to make it easy to check the details about the function setting status, refrigerant temperature, pressure, compressor operation time, and other factors for each model to make it easy to perform self-diagnostics.

Easy to read 7-segment LED : Confirm detailed operational and error status without using any specific equipment.

7-segment LED

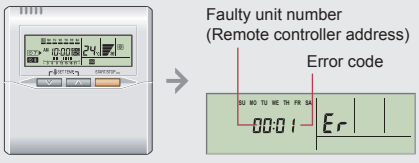
Movable PCB panel
Easier for maintenance work behind the PCB

- Operation mode status•
- Discharge temperature/Pressure status
- Compressor operation indication
- Address/type/number of outdoor unit

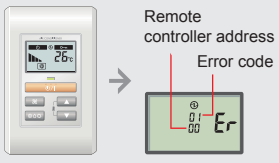
Error status can be checked easily via the indoor unit wired controller

An error code is displayed on a liquid crystal screen.

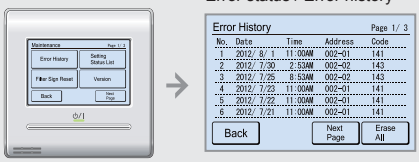
Wired Remote Controller



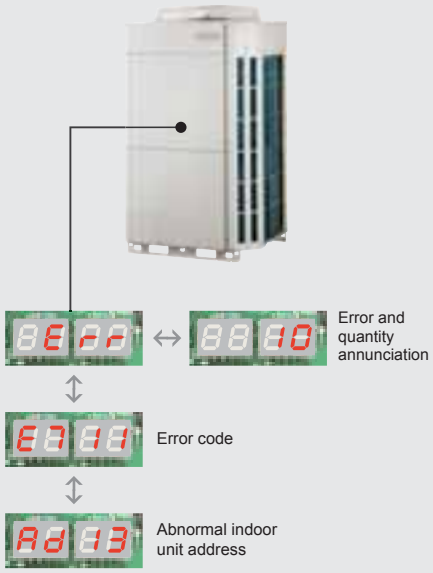
Simple Remote Controller



Wired Remote Controller (Touch panel)



Error status can be cheked easily by outdoor unit display

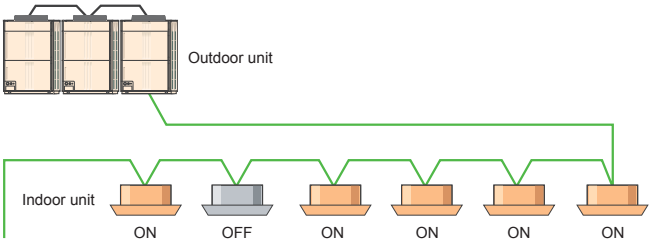


Continuous operation during maintenance

Non-stop operation

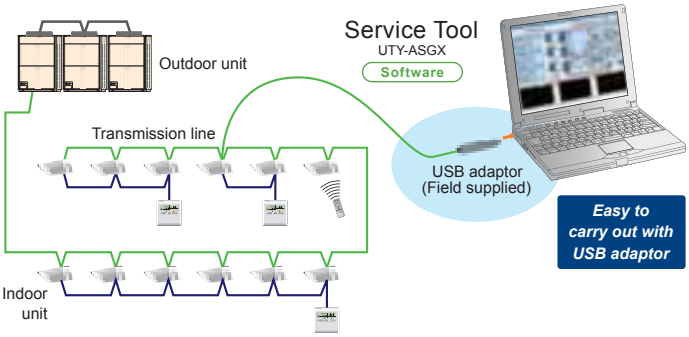
When servicing a specific indoor unit, maintenance can be performed even without turning off the other indoor units.

*Note: VR-II Series and J-II Series are not available.



Error diagnosis by Service Tool

Necessary maintenance can be carried out after analysing the operation data. The service tool can be connected anywhere in the VRF network.



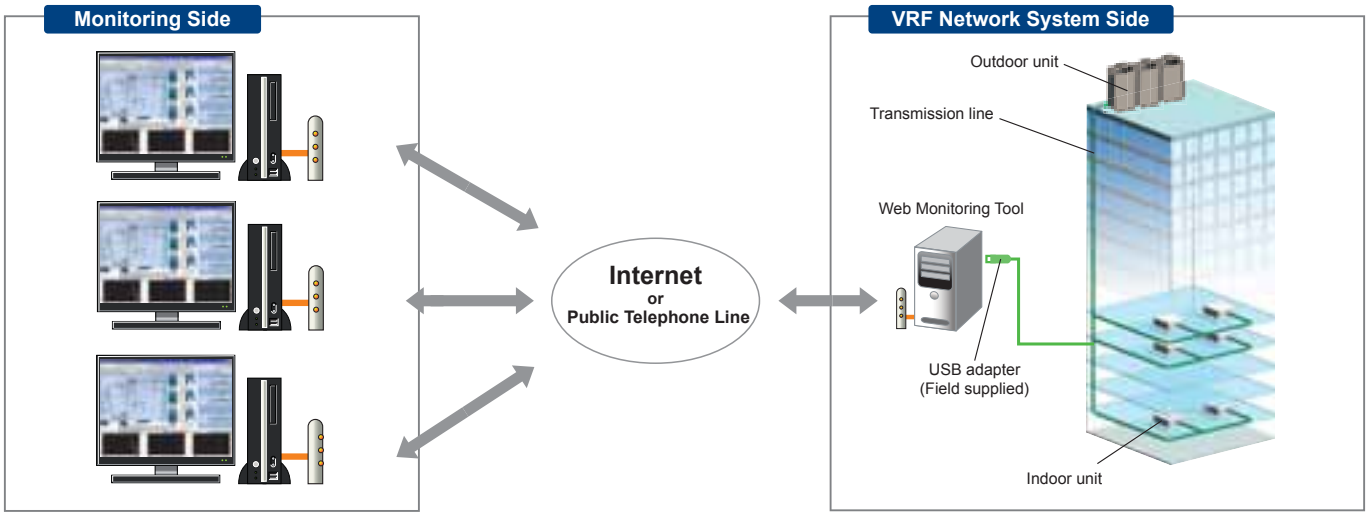
Equipment Detail (Diagram)

Equipment Detail (List)

Remote monitoring

The Web Monitoring system allows you to view system operation anytime over the internet, ensuring issue free operation.

Web Monitoring System



AIRSTAGE™ SERIES

The AIRSTAGE VRF Range of products is made up of 51 outdoor unit models to help designers meet the needs requirements of projects designers are working on.

The AIRSTAGE series outdoor units were developed with structural designs and advanced inverter technology to provide higher efficiency.
High durability technology has also been incorporated to ensure long-term use.

HEAT RECOVERY TYPE AIRSTAGE VR-II

HEAT PUMP TYPE AIRSTAGE V-II

HEAT PUMP TYPE AIRSTAGE J-IIS

HEAT PUMP TYPE AIRSTAGE J-II

AIRSTAGE™

HEAT RECOVERY TYPE

AIRSTAGE™ VR-II series

Smart and cutting edge design
Extensive lineup from 8HP to 42HP in 2HP increment
Connectable indoor unit capacity ratio up to 150%

System Outline

Simultaneous cooling and heating operation using 1 refrigerant system

Cooling and heating can be freely selected for each indoor unit to provide simultaneous cooling and heating in rooms with large temperature differences.

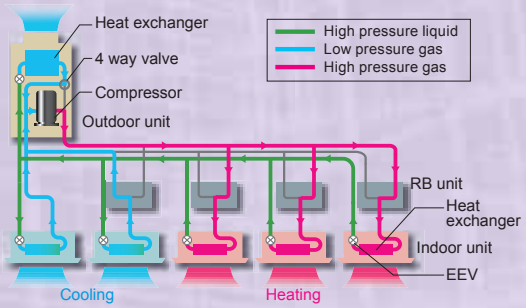
Annual cooling operation

Use annual cooling operation for the rooms and other spaces that require constant temperature control throughout the year.

Handles changes in the temperature difference

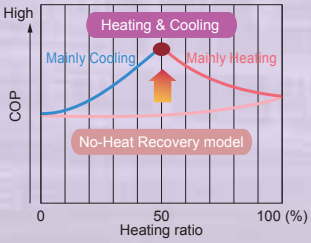
The operation mode can be freely changed when there are large temperature differences during the day, such as between seasons.

Large Building



Our Heat recovery systems achieve high operating energy efficiency by drawing heat from the room to be cooled and transferring it as energy for rooms that are to be heated.

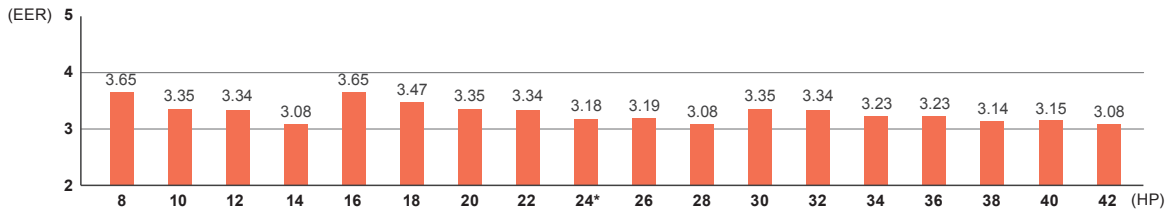
Energy saving of the operating systems has been approved as heating and cooling modes can be operated at the same time on the same air conditioning piping system.



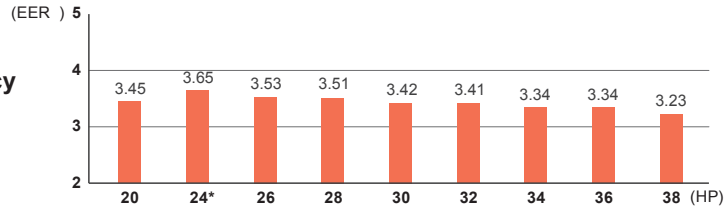
Efficiency in actual operation

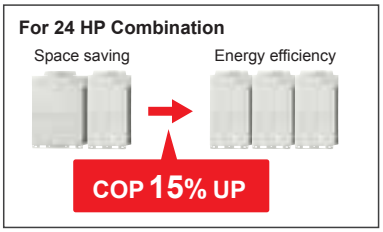
Top class high COP is achieved for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and our own technologies.

Space saving combination



Energy efficiency combination





Energy saving technology that boosted operation efficiency

Powerful large propeller fan

By using CFD*1 technology, a newly designed fan achieves high performance and low noise operation.

*1. CFD = Computational Fluid Dynamics

3 phase DC fan motor

Efficiency is substantially improved by high efficient motor with sophisticated driver control. In addition, low noise is realized by DC fan motor.

Subcool heat exchanger

High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.

Sine-wave DC inverter control

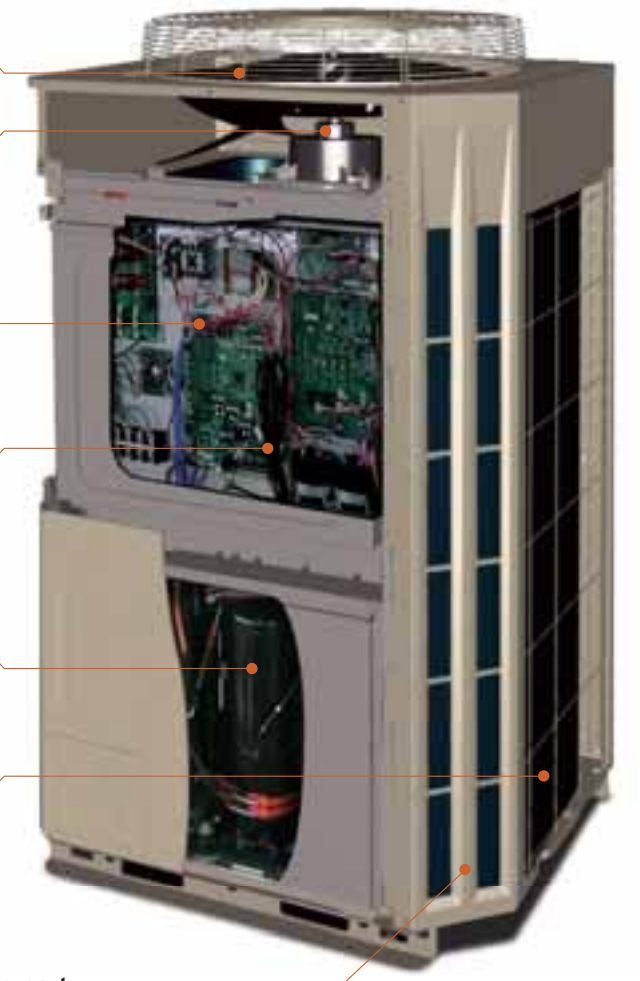
High efficiency is realized by adoption of reduced switching loss IPM.

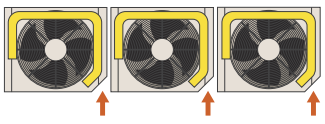
High efficient compressor Large capacity DC inverter compressor

Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.

4-face heat exchanger

Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.





Front intake port

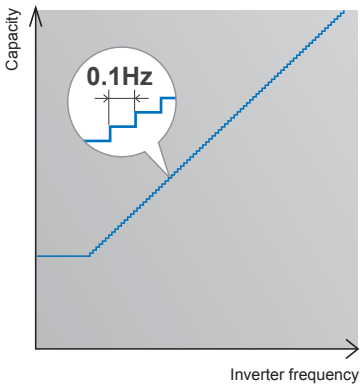
(corner cut air inhaling structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

All inverter compressor

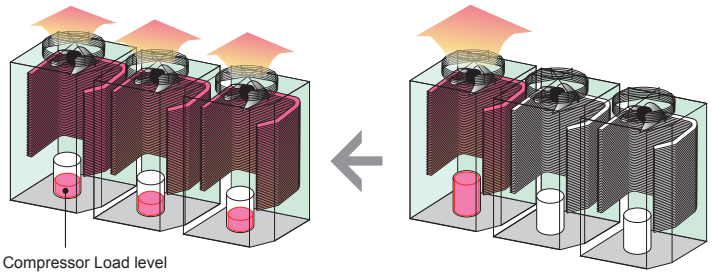
Large capacity DC inverter compressor
Large capacity high efficient DC twin rotary compressor with excellent intermediate capability.

High efficient compressor speed control
Comfortable space with small room temperature changes and little energy loss is created by 0.1Hz steps compressor speed control.



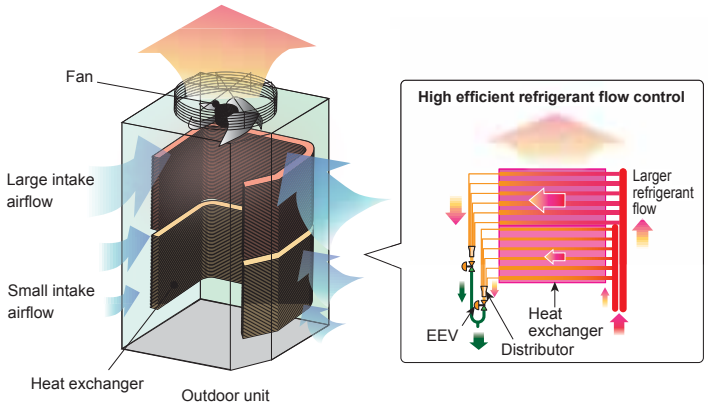
Multiple outdoor operation control

When multiple outdoor units are connected a sophisticated operation is performed by each compressor. Rather than running one compressor at full load and distributing refrigerant to one heat exchanger, this control method operates all compressors at part load and distributes refrigerant to all of the heat exchangers which allows for the overall system efficiency to be improved.



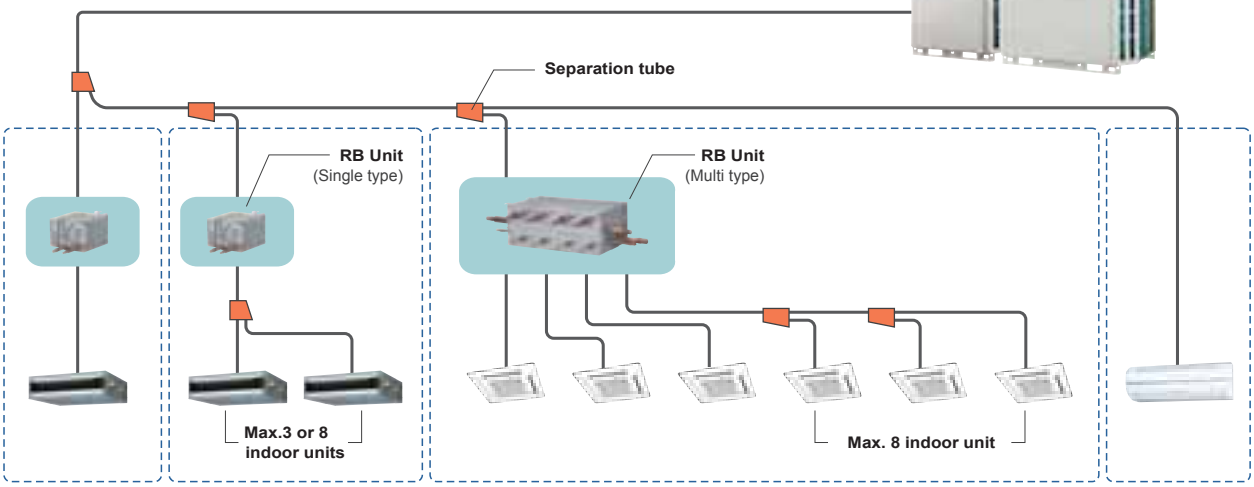
Heat exchanger refrigerant control

The heat exchanger in the outdoor unit is split into two parts (Top and Bottom). The efficiency of the heat exchanger has been improved by adopting an optimum refrigerant path control where the refrigerant is distributed more into the top heat exchanger as this is where there is a greater air flow intake.



Flexible piping connection

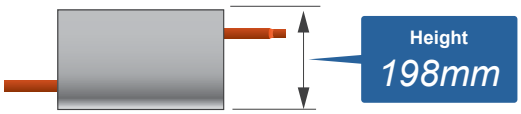
A more flexible refrigerant piping work is possible by the use of various piping and RB Unit connections, for adjustments to the floor layout and building structure.



	Single connection	Group connection	Single connection & Group connection	RB Unit less connection*2
Application	Individual cooling and heating	Simultaneous cooling and heating	Individual cooling and heating / Simultaneous cooling and heating	Cooling only

• The RB unit can be freely positioned between the first branch and the indoor unit.
• The maximum height difference between RB units is 15 m.
*2. RB Unit is not necessary for cooling only use.

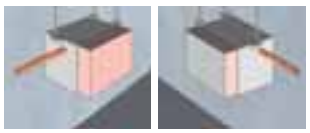
Flexible installation of RB unit



RB unit (single type)

RB unit (multi type)

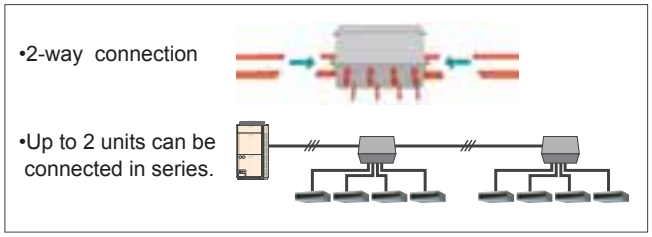
- Small & slim design saves space
- A drain pipe is not required
- The control box position can be changed to meet the installation conditions



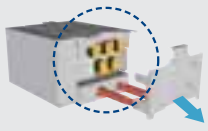
Installation possible from either side for freedom of the control box

Installation possible on the upper-side for use in narrow space

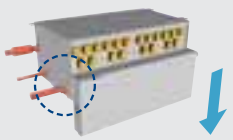
- Small design saves space
- A drain pipe is not required
- Simple installation series connection design



Easy to maintenance in a narrow space

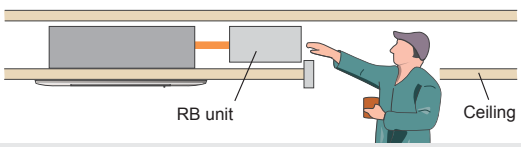


- Maintenance can be performed from the side.



- Electrics box can be temporarily fixed by sliding down.

- Parts can be replaced easily even at narrow space in the ceiling.



Outdoor units lineup

• **Combinations other than the followings are not recommended.**

Space saving combination

22.4kW (8HP) AJTA72GALH UNIT : AJTA72GALH	28.0kW (10HP) AJTA90GALH UNIT : AJTA90GALH	33.5kW (12HP) AJT108GALH UNIT : AJT108GALH	40.0kW (14HP) AJT126GALH UNIT : AJT126GALH
44.8kW (16HP) AJT144GALH UNIT : AJTA72/A72GALH	50.4kW (18HP) AJT162GALH UNIT : AJTA90/A72GALH	56.0kW (20HP) AJT180GALH UNIT : AJTA90/A90GALH	61.5kW (22HP) AJT198GALH UNIT : AJT108/A90GALH
68.0kW (24HP) AJT216GALH UNIT : AJT126/A90GALH	73.5kW (26HP) AJT234GALH UNIT : AJT126/108GALH	80.0kW (28HP) AJT252GALH UNIT : AJT126/126GALH	84.0kW (30HP) AJT270GALH UNIT : AJTA90/A90/A90GALH
89.5kW (32HP) AJT288GALH UNIT :AJT108/A90/A90GALH	96.0kW (34HP) AJT306GALH UNIT : AJT126/A90/A90GALH	101.5kW (36HP) AJT324GALH UNIT : AJT126/108/A90GALH	108.0kW (38HP) AJT342GALH UNIT : AJT126/126/A90GALH
113.5kW (40HP) AJT360GALH UNIT : AJT126/126/108GALH	120.0kW (42HP) AJT378GALH UNIT : AJT126/126/126GALH		

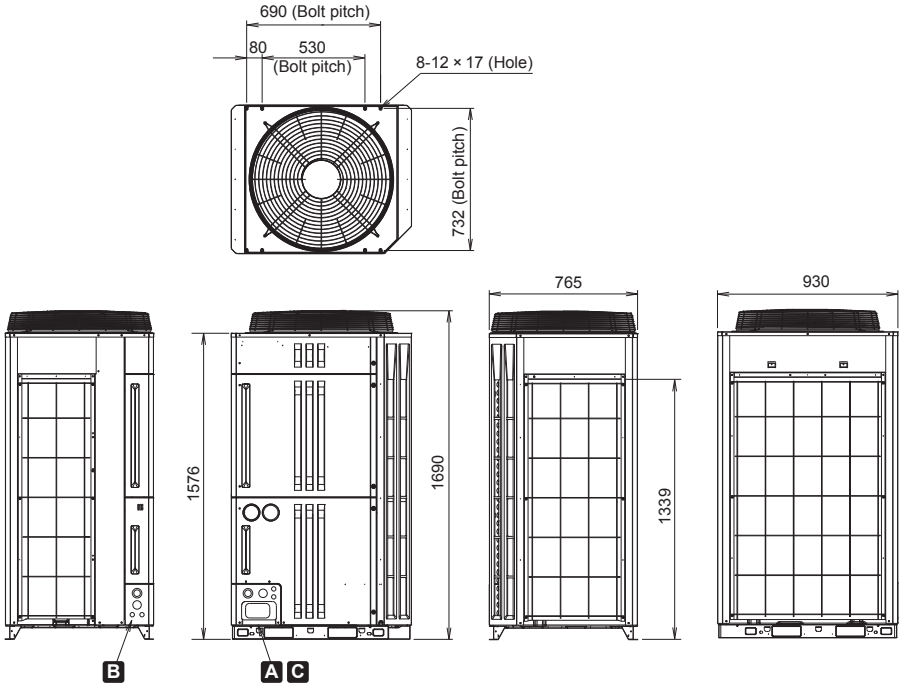
Energy efficiency combination

55.9kW (20HP) AJT180GALHH UNIT : AJT108/A72GALH	67.2kW (24HP) AJT216GALHH UNIT : AJTA72/A72/A72GALH	72.8kW (26HP) AJT234GALHH UNIT : AJTA90/A72/A72GALH	78.3kW (28HP) AJT252GALHH UNIT : AJT108/A72/A72GALH
83.9kW (30HP) AJT270GALHH UNIT : AJT108/A90/A72GALH	89.4kW (32HP) AJT288GALHH UNIT : AJT108/108/A90GALH	95.0kW (34HP) AJT306GALHH UNIT : AJT108/108/A90GALH	100.5kW (36HP) AJT324GALHH UNIT : AJT108/108/108GALH
107.0kW (38HP) AJT342GALHH UNIT : AJT126/108/108GALH			

Dimensions

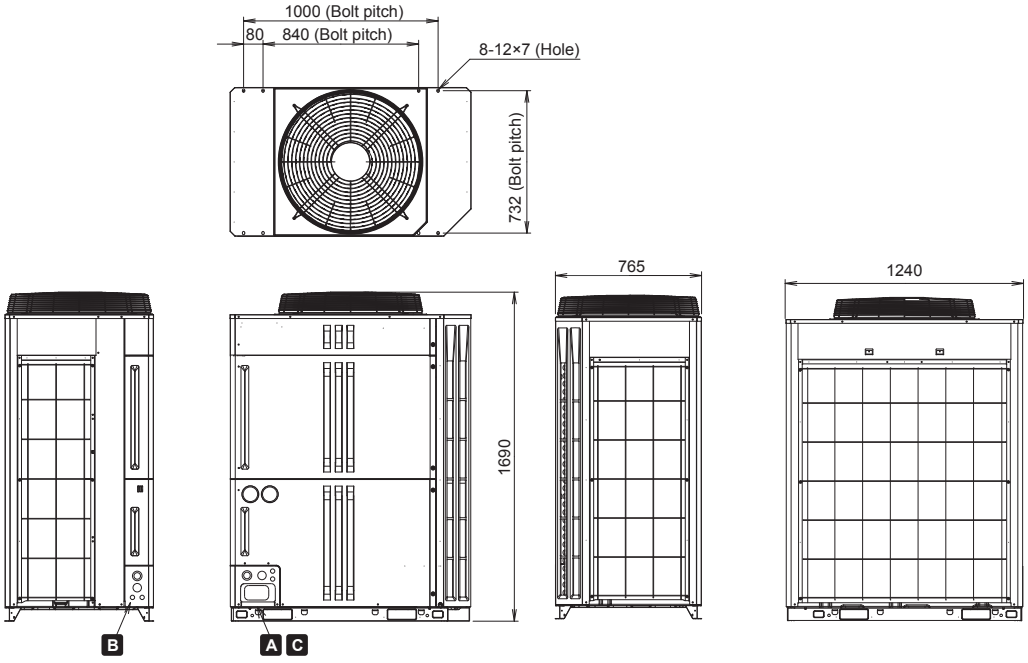
8,10HP : AJTA72GALH / AJTA90GALH

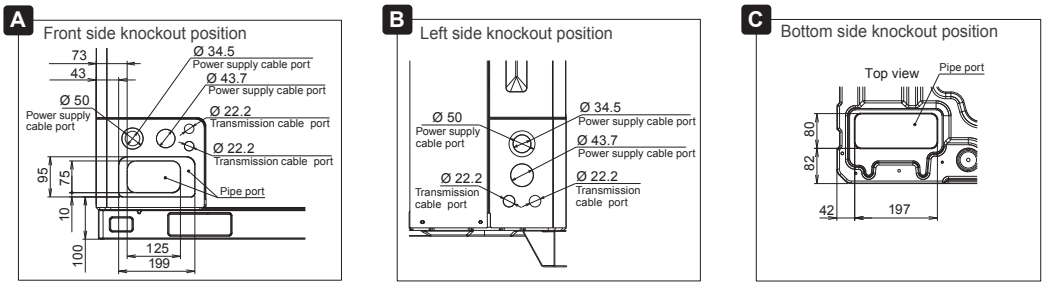
(Unit : mm)



12,14HP : AJT108GALH / AJT126GALH

(Unit : mm)





Space Saving Combination

Rating Capacity range		HP	8	10	12	14	16	18	20
Model name			AJTA72GALH	AJTA90GALH	AJT108GALH	AJT126GALH	AJT144GALH	AJT162GALH	AJT180GALH
Unit 1 Unit 2 Unit 3			AJTA72GALH	AJTA90GALH	AJT108GALH	AJT126GALH	AJTA72GALH AJTA72GALH	AJTA90GALH AJTA72GALH	AJTA90GALH AJTA90GALH
Maximum Connectable Indoor Unit*1			15	16	17	21	24	27	30
Indoor unit connectable capacity	Cooling	kW	11.2-33.6	14.0-42.0	16.8-50.2	20.0-60.0	22.4-67.2	25.2-75.6	28.0-84.0
Power source			3-phase 4 wire, 400 V, 50Hz						
Capacity	Cooling	kW	22.4	28.0	33.5	40.0	44.8	50.4	56.0
	Heating		25.0	31.5	37.5	45.0	50.0	56.5	63.0
Input power	Cooling	kW	6.14	8.37	10.04	13.00	12.28	14.51	16.74
	Heating		6.01	8.41	9.57	12.31	12.02	14.42	16.82
EER	Cooling	W/W	3.65	3.35	3.34	3.08	3.65	3.47	3.35
COP	Heating		4.16	3.75	3.92	3.66	4.16	3.92	3.75
Air flow rate	High	m^3/h (l/s)	11,100 (3,084)	11,100 (3,084)	13,000 (3,611)	13,000 (3,611)	11,100×2 (3,084×2)	11,100×2 (3,084×2)	11,100×2 (3,084×2)
Sound pressure level*2	Cooling	dB (A)	56	58	57	61	59	60	61
	Heating		58	59	59	61	61	62	62
Maximum external static pressure		Pa	80	80	80	80	80	80	80
Compressor motor output		kW	7.5	7.5	11.0	11.0	7.5×2	7.5×2	7.5×2
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690	1,690
	Width	mm	930	930	1,240	1,240	930×2	930×2	930×2
	Depth	mm	765	765	765	765	765	765	765
Weight		kg	262	262	286	286	262×2	262×2	262×2
Refrigerant charge		kg	11.8	11.8	11.8	11.8	11.8×2	11.8×2	11.8×2
Connection pipe diameter	Liquid	mm	12.70	12.70	12.70	12.70	12.70	15.88	15.88
	Discharge Gas		15.88	19.05	19.05	22.22	22.22	22.22	22.22
	Suction Gas		22.22	22.22	28.58	28.58	28.58	28.58	28.58
Operation range	Cooling	˚CDB	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
	Cooling/Heating		-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21

Energy Efficiency Combination

Rating Capacity range		HP	20	24	26	28
Model name			AJT180GALHH	AJT216GALHH	AJT234GALHH	AJT252GALHH
Unit 1 Unit 2 Unit 3			AJT108GALH AJTA72GALH	AJTA72GALH AJTA72GALH AJTA72GALH	AJTA90GALH AJTA72GALH AJTA72GALH	AJT108GALH AJTA72GALH AJTA72GALH
Maximum Connectable Indoor Unit*1			29	36	39	41
Indoor unit connectable capacity	Cooling	kW	28.0-83.8	33.6-100.8	36.4-109.2	39.2-117.4
Power source			3-phase 4 wire, 400 V, 50Hz			
Capacity	Cooling	kW	55.9	67.2	72.8	78.3
	Heating		62.5	75.0	81.5	87.5
Input power	Cooling	kW	16.18	18.42	20.65	22.32
	Heating		15.58	18.03	20.43	21.59
EER	Cooling	W/W	3.45	3.65	3.53	3.51
COP	Heating		4.01	4.16	3.99	4.05
Air flow rate	High	m^3/h (l/s)	13,000+11,100 (3,611+3,084)	11,100×3 (3,084×3)	11,100×3 (3,084×3)	13,000+11,100×2 (3,611+3,084×2)
Sound pressure level*2	Cooling	dB (A)	60	61	62	61
	Heating		62	63	63	63
Maximum external static pressure		Pa	80	80	80	80
Compressor motor output		kW	11.0+7.5	7.5×3	7.5×3	11.0+7.5×2
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,690	1,690	1,690	1,690
	Width	mm	1,240+930	930×3	930×3	1,240+930×2
	Depth	mm	765	765	765	765
Weight		kg	286+262	262×3	262×3	286+262×2
Refrigerant charge		kg	11.8×2	11.8×3	11.8×3	11.8×3
Connection pipe diameter	Liquid	mm	15.88	15.88	15.88	15.88
	Discharge Gas		22.22	28.58	28.58	28.58
	Suction Gas		28.58	34.92	34.92	34.92
Operation range	Cooling	˚CDB	-10 to 46	-10 to 46	-10 to 46	-10 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21
	Cooling/Heating		-10 to 21	-10 to 21	-10 to 21	-10 to 21

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

22	24	26	28	30	32	34	36	38	40	42
AJT198GALH	**AJT216GALH**	**AJT234GALH**	**AJT252GALH**	**AJT270GALH**	**AJT288GALH**	**AJT306GALH**	**AJT324GALH**	**AJT342GALH**	**AJT360GALH**	**AJT378GALH**
AJT108GALH AJTA90GALH	AJT126GALH AJTA90GALH	AJT126GALH AJT108GALH	AJT126GALH AJT126GALH	AJTA90GALH AJTA90GALH AJTA90GALH	AJT108GALH AJTA90GALH AJTA90GALH	AJT126GALH AJTA90GALH AJTA90GALH	AJT126GALH AJT108GALH AJTA90GALH	AJT126GALH AJT126GALH AJTA90GALH	AJT126GALH AJT126GALH AJT108GALH	AJT126GALH AJT126GALH AJT126GALH
32	36	39	42	45	47	51	54	57	60	64
30.8-92.2	34.0-102.0	36.8-110.2	40.0-120.0	42.0-126.0	44.8-134.2	48.0-144.0	50.8-152.2	54.0-162.0	56.8-170.2	60.0-180.0
3-phase 4 wire , 400 V, 50Hz										
61.5	68.0	73.5	80.0	84.0	89.5	96.0	101.5	108.0	113.5	120.0
69.0	76.5	82.5	90.0	94.5	100.5	108.0	114.0	121.5	127.5	135.0
18.41	21.37	23.04	25.98	25.11	26.78	29.74	31.41	34.37	36.04	39.00
17.98	20.72	21.88	24.62	25.23	26.39	29.13	30.29	33.03	34.19	36.93
3.34	3.18	3.19	3.08	3.35	3.34	3.23	3.23	3.14	3.15	3.08
3.84	3.69	3.77	3.66	3.75	3.81	3.71	3.76	3.68	3.73	3.66
13,000+11,100 (3,611+3,084)	13,000+11,100 (3,611+3,084)	13,000×2 (3,611×2)	13,000×2 (3,611×2)	11,100×3 (3,084×3)	13,000+11,100×2 (3,611+3,084×2)	13,000+11,100×2 (3,611+3,084×2)	13,000×2+11,100 (3,611×2+3,084)	13,000×2+11,100 (3,611×2+3,084)	13,000×3 (3,611×3)	13,000×3 (3,611×3)
61	63	62	64	63	62	64	64	65	65	66
62	63	63	64	64	64	65	65	65	65	66
80	80	80	80	80	80	80	80	80	80	80
11.0+7.5	11.0+7.5	11.0×2	11.0×2	7.5×3	11.0+7.5×2	11.0+7.5×2	11.0×2+7.5	11.0×2+7.5	11.0×3	11.0×3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
1,240+930	1,240+930	1,240×2	1,240×2	930×3	1,240+930×2	1,240+930×2	1,240×2+930	1,240×2+930	1,240×3	1,240×3
765	765	765	765	765	765	765	765	765	765	765
286+262	286+262	286×2	286×2	262×3	286+262×2	286+262×2	286×2+262	286×2+262	286×3	286×3
11.8×2	11.8×2	11.8×2	11.8×2	11.8×3	11.8×3	11.8×3	11.8×3	11.8×3	11.8×3	11.8×3
15.88	15.88	15.88	15.88	19.05	19.05	19.05	19.05	19.05	19.05	19.05
28.58	28.58	28.58	28.58	28.58	28.58	28.58	28.58	34.92	34.92	34.92
34.92	34.92	34.92	34.92	34.92	34.92	34.92	41.27	41.27	41.27	41.27
-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21

30	32	34	36	38
AJT270GALHH	**AJT288GALHH**	**AJT306GALHH**	**AJT324GALHH**	**AJT342GALHH**
AJT108GALH AJTA90GALH AJTA72GALH	AJT108GALH AJT108GALH AJTA72GALH	AJT108GALH AJT108GALH AJTA90GALH	AJT108GALH AJT108GALH AJT108GALH	AJT126GALH AJT108GALH AJT108GALH
44	47	50	53	57
42.0-125.8	44.7-134.1	47.5-142.5	50.3-150.7	53.5-160.5
3-phase 4 wire, 400 V, 50Hz				
83.9	89.4	95.0	100.5	107.0
94.0	100.0	106.5	112.5	120.0
24.55	26.22	28.45	30.12	33.08
23.99	25.15	27.55	28.71	31.45
3.42	3.41	3.34	3.34	3.23
3.92	3.98	3.87	3.92	3.82
13,000+11,100×2 (3,611+3,084×2)	13,000×2+11,100 (3,611×2+3,084)	13,000×2+11,100 (3,611×2+3,084)	13,000×3 (3,611×3)	13,000×3 (3,611×3)
62	65	65	62	64
63	65	65	64	65
80	80	80	80	80
11.0+7.5×2	11.0×2+7.5	11.0×2+7.5	11.0×3	11.0×3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690
1,240+930×2	1,240×2+930	1,240×2+930	1,240×3	1,240×3
765	765	765	765	765
286+262×2	286×2+262	286×2+262	286×3	286×3
11.8×3	11.8×3	11.8×3	11.8×3	11.8×3
19.05	19.05	19.05	19.05	19.05
28.58	28.58	28.58	28.58	34.92
34.92	34.92	34.92	41.27	41.27
-10 to 46	-10 to 46	-10 to 46	-10 to 46	-10 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21
-10 to 21	-10 to 21	-10 to 21	-10 to 21	-10 to 21

*1 Minimum connectable indoor unit number is 2.

*2 These are the measured values in the manufacturer's anechoic chamber. Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

HEAT PUMP TYPE

AIRSTAGE™ V-II series

Smart and cutting edge design
Extensive lineup from 8HP to 42HP in 2HP increment
Connectable indoor unit capacity ratio up to 130%

System Outline

Excellent energy savings

Heat pump type inverter control is used to achieve economic cooling and heating operation for individual air conditioning to entire air conditioning.

High design flexibility for various building air conditioning

The high static pressure design flexibly meets the needs of high rise buildings including easy installation on each floor.

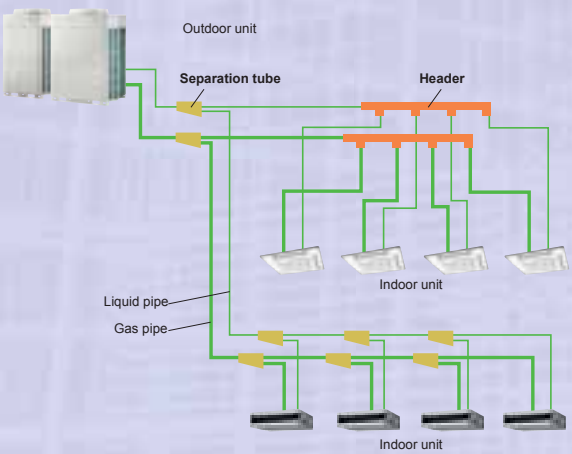
Easy installation and maintenance

The flexible communication method and piping connections makes installation and maintenance easy even for large systems.

Large Office

System configuration example

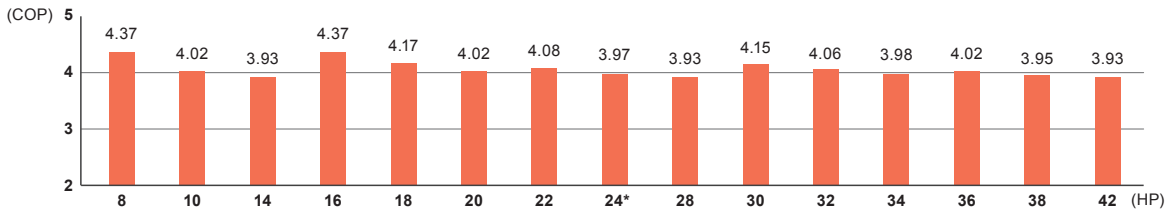
- This system is used for medium-sized and large buildings. Connecting each outdoor unit makes it possible to create a high-capacity system.
- Connection of multiple indoor units using separation tubes and headers.



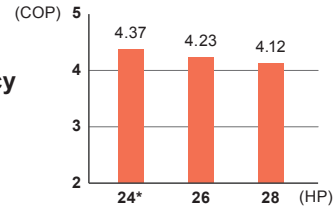
Efficiency in actual operation

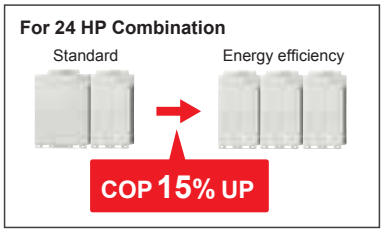
Top class high EER is realized for all combinations by our unique heat exchanger structure, high efficient DC twin compressor, and other our own technologies.

Standard combination



Energy efficiency combination





Energy saving technology that boosted operation efficiency

Powerful large propeller fan

By using CFD*1 technology, A newly designed fan achieves high performance and low noise operation.

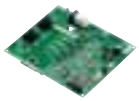
*1. CFD = Computational Fluid Dynamics

DC fan motor

Power consumption has been reduced by 25% compared to previous models by using a compact and high performance DC fan motor.

Subcool heat exchanger

High Heat Exchange efficiency is achieved by using an internal projection shape double pipe construction.



Sine-wave DC inverter control

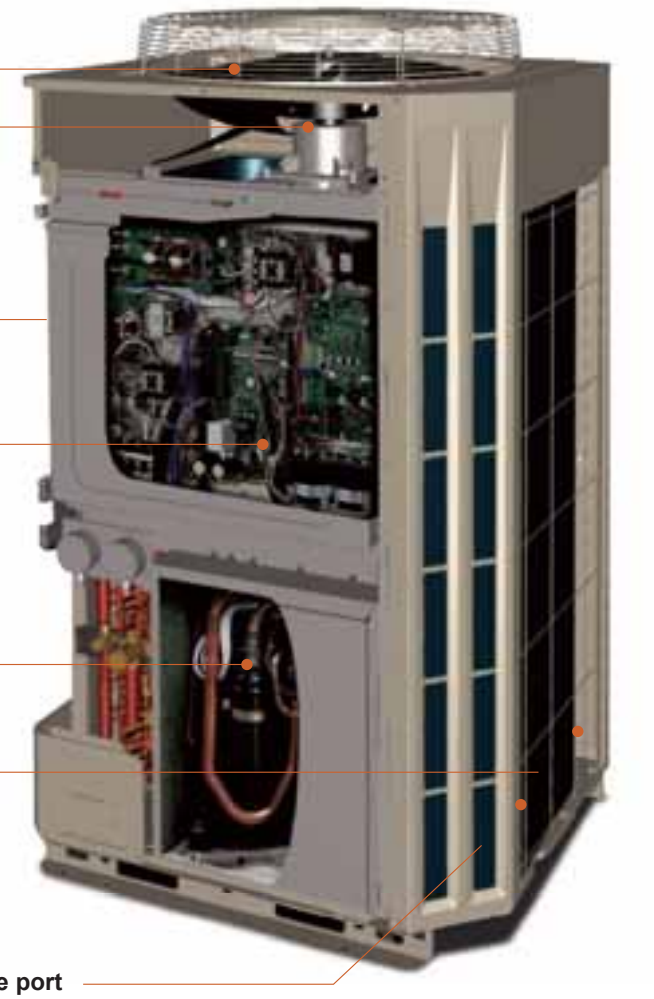
High efficiency operation is realized by using a sine wave DC inverter control.

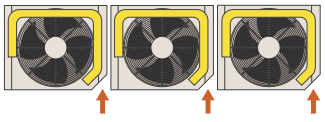
DC twin rotary compressor

Significantly greater efficiency is realized by use of a large capacity DC twin rotary compressor with substantially increased refrigerant intake and compression efficiency.

4-face heat exchanger

Heat exchange efficiency is significantly improved by the introduction of a new 4-face heat exchanger that increases effective surface area.





Front intake port

(Corner cut air inhaling structure)

In multiple outdoor unit installations, the unique front intake design improves airflow into the Heat Exchanger.

Outdoor units lineup

• **Combinations other than the followings are not recommended.**

Space Saving Combination

22.4kW (8HP) AJYA72LALH UNIT : AJYA72LALH	28.0kW (10HP) AJYA90LALH UNIT : AJYA90LALH	40.0kW (14HP) AJY126LALH UNIT : AJY126LALH	45.0kW (16HP) AJY144LALH UNIT : AJYA72/A72LALH	50.4kW (18HP) AJY162LALH UNIT : AJYA90/A72LALH
55.9kW (20HP) AJY180LALH UNIT : AJYA90/A90LALH	61.5kW (22HP) AJY198LALH UNIT : AJY126/A72LALH	67.0kW (24HP) AJY216LALH UNIT : AJY126/A90LALH	78.5kW (28HP) AJY252LALH UNIT : AJY126/126LALH	85.0kW (30HP) AJY270LALH UNIT : AJY126/A72/A72LALH
90.0kW (32HP) AJY288LALH UNIT : AJY126/A90/A72LALH	95.0kW (34HP) AJY306LALH UNIT : AJY126/A90/A90LALH	100.5kW (36HP) AJY324LALH UNIT : AJY126/126/A72LALH	107.0kW (38HP) AJY342LALH UNIT : AJY126/126/A90LALH	135.0kW (42HP) AJY378LALH UNIT : AJY126/126/126LALH

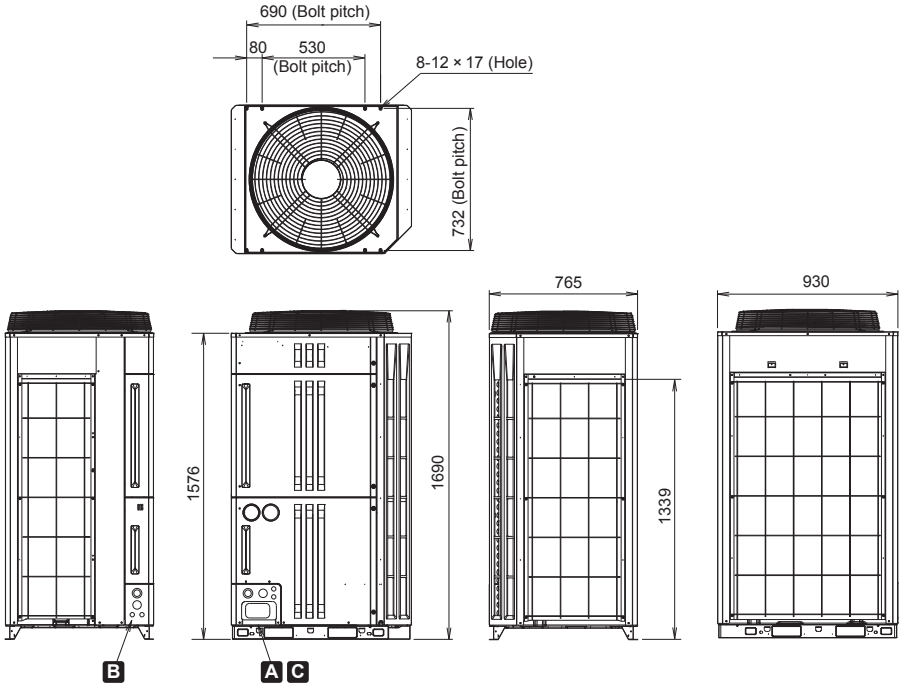
Energy efficiency combination

67.2kW (24HP) AJY216LALHH UNIT : AJYA72/A72/A72LALH	72.8kW (26HP) AJY234LALHH UNIT : AJYA90/A72/A72LALH	78.3kW (28HP) AJY252LALHH UNIT : AJYA90/A90/A72LALH

Dimensions

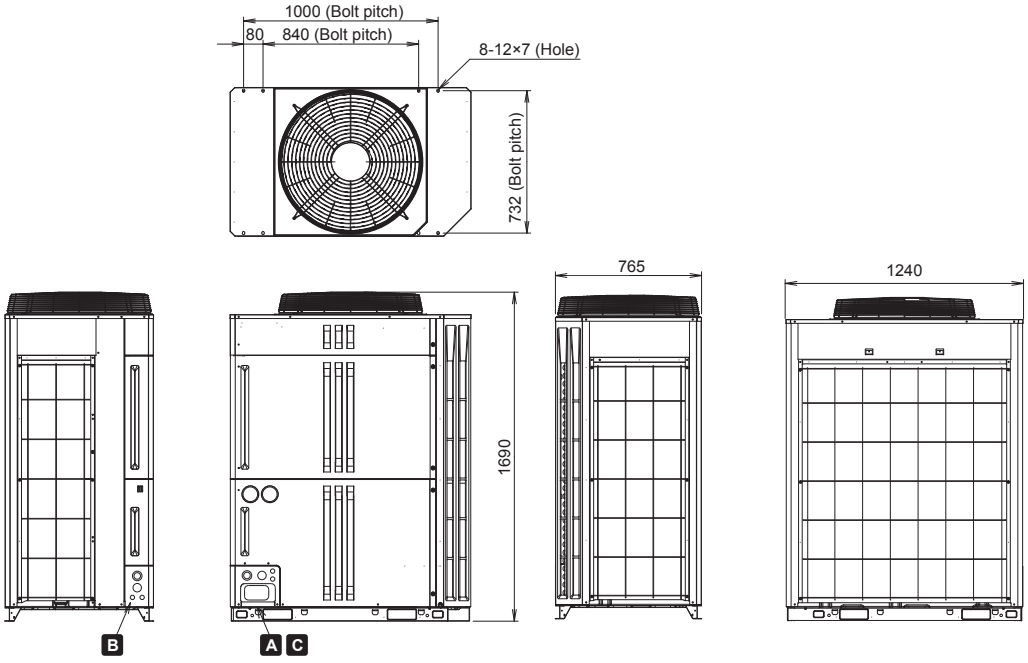
8,10HP : AJYA72LALH / AJYA90LALH

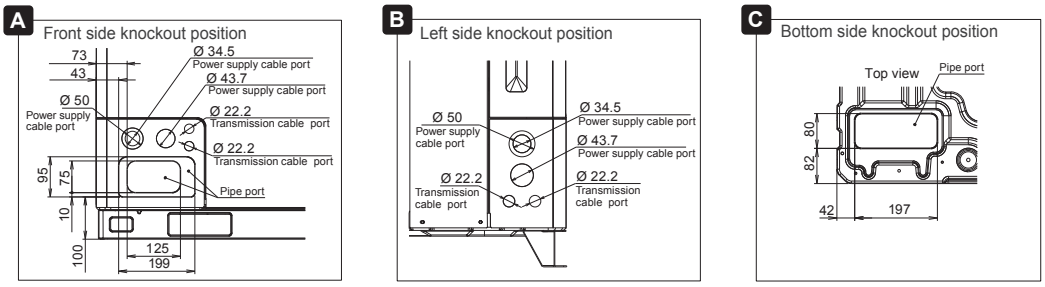
(Unit : mm)



14HP : AJY126LALH

(Unit : mm)





Space Saving Combination

Rating Capacity range	HP		8	10	14	16	18	20	22	24
Model name			**AJYA72LALH**	**AJYA90LALH**	**AJY126LALH**	**AJY144LALH**	**AJY162LALH**	**AJY180LALH**	**AJY198LALH**	**AJY216LALH**
Unit 1 Unit 2 Unit 3			AJYA72LALH	AJYA90LALH	AJY126LALH	AJYA72LALH AJYA72LALH	AJYA90LALH AJYA72LALH	AJYA90LALH AJYA90LALH	AJY126LALH AJYA72LALH	AJY126LALH AJYA90LALH
Maximum Connectable Indoor Unit*1			15	16	21	30	32	32	33	36
Indoor unit connectable capacity	Cooling	kW	11.2-33.6	14.0-42.0	20.0-60.0	22.4-67.2	25.2-75.6	28.0-84.0	31.2-93.6	34.0-102.0
Power source			3N ～ 400V, 50Hz							
Capacity	Cooling	kW	22.4	28.0	40.0	44.8	50.4	56.0	62.4	68.0
	Heating		25.0	31.5	45.0	50.0	56.5	63.0	70.0	76.5
Input power	Cooling	kW	5.51	7.73	11.53	11.02	13.24	15.46	17.04	19.26
	Heating		5.72	7.83	11.45	11.44	13.55	15.66	17.17	19.28
EER	Cooling	W/W	4.07	3.62	3.47	4.07	3.81	3.62	3.66	3.53
COP	Heating	W/W	4.37	4.02	3.93	4.37	4.17	4.02	4.08	3.97
Airflow late		m^3/h (l/s)	11,100 (3,084)	11,100 (3,084)	13,000 (3,611)	11,100×2 (3,084×2)	11,100×2 (3,084×2)	11,100×2 (3,084×2)	13,000+11,100 (3,611+3,084)	13,000+11,100 (3,611+3,084)
Sound pressure level *2	Cooling	dB (A)	56	58	60	59	60	61	61	62
	Heating		58	59	61	59	62	62	62	63
Maximum external static pressure		Pa	80	80	80	80	80	80	80	80
Compresor motor output		kW	3.9	3.9	3.9＋4.5	3.9×2	3.9×2	3.9×2	3.9×2＋4.5	3.9×2＋4.5
Heat exchanger fin			Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,690	1,690	1,690	1,690	1,690	1,690	1,690	1,690
	Width		930	930	1,240	930×2	930×2	930×2	1,240+930	1,240+930
	Depth		765	765	765	765	765	765	765	765
Weight		kg	220	220	303	220+220	220+220	220+220	303+220	303+220
Refrigerant charge		kg	11.2	11.2	11.8	11.2×2	11.2×2	11.2×2	11.8＋11.2	11.8＋11.2
Connection pipe diameter	Liquid	mm	12.70	12.70	12.70	12.70	15.88	15.88	15.88	15.88
	Gas		22.22	22.22	28.58	28.58	28.58	28.58	34.92	34.92
Operation temperature range	Cooling	°CWB	-15 to 46 *3	-15 to 46 *3	-15 to 46 *3	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

*1 Minimum connectable indoor unit number is 2.
However ARXC72 and ARXC90 can be used signal connection.

Energy Efficiency Combination

28	30	32	34	36	38	42
AJY252LALH	**AJY270LALH**	**AJY288LALH**	**AJY306LALH**	**AJY324LALH**	**AJY342LALH**	**AJY378LALH**
AJY126LALH AJY126LALH	AJY126LALH AJYA72LALH AJYA72LALH	AJY126LALH AJYA90LALH AJYA72LALH	AJY126LALH AJYA90LALH AJYA90LALH	AJY126LALH AJY126LALH AJYA72LALH	AJY126LALH AJY126LALH AJYA90LALH	AJY126LALH AJY126LALH AJY126LALH
42	45	48	48	48	48	48
40.0-120.0	42.4-127.2	45.2-135.6	48.0-144.0	51.2-153.6	54.0-162.0	60.0-180.0
3N ～ 400V, 50Hz						
80.0	84.8	90.4	96.0	102.4	108.0	120.0
90.0	95.0	101.5	108.0	115.0	121.5	135.0
23.06	22.55	24.77	26.99	28.57	30.79	34.59
22.90	22.89	25.00	27.11	28.62	30.73	34.35
3.47	3.76	3.65	3.56	3.58	3.51	3.46
3.93	4.15	4.06	3.98	4.02	3.95	3.93
13,000×2 (3,611×2)	13,000+11,100×2 (3,611+3,084×2)	13,000+11,100×2 (3,611+3,084×2)	13,000+11,100×2 (3,611+3,084×2)	13,000×2+11,100 (3,611×2+3,084)	13,000×2+11,100 (3,611×2+3,084)	13,000×3 (3,611×3)
63	63	63	64	64	64	65
64	63	64	65	65	65	66
80	80	80	80	80	80	80
3.9×2＋4.5×2	3.9×3＋4.5	3.9×3＋4.5	3.9×3＋4.5	3.9×3＋4.5×2	3.9×3＋4.5×2	3.9×3＋4.5×3
Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin	Blue fin
1,690	1,690	1,690	1,690	1,690	1,690	1,690
1,240×2	1,240+930×2	1,240+930×2	1,240+930×2	1,240×2+930	1,240×2+930	1,240×3
765	765	765	765	765	765	765
303+303	303+220+220	303+220+220	303+220+220	303+303+220	303+303+220	303+303+303
11.8×2	11.8+11.2×2	11.8+11.2×2	11.8+11.2×2	11.8×2+11.2	11.8×2+11.2	11.8×3
15.88	19.05	19.05	19.05	19.05	19.05	19.05
34.92	34.92	34.92	34.92	41.27	41.27	41.27
-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21	-20 to 21

24	26	28
AJY216LALHH	**AJY234LALHH**	**AJY252LALHH**
AJYA72LALH AJYA72LALH AJYA72LALH	AJYA90LALH AJYA72LALH AJYA72LALH	AJYA90LALH AJYA90LALH AJYA72LALH
36	39	42
33.6-100.8	36.4-109.2	39.2-117.6
3N ～ 400V, 50Hz		
67.2	72.8	78.4
75.0	81.5	88.0
16.53	18.75	20.97
17.16	19.27	21.38
4.07	3.88	3.74
4.37	4.23	4.12
11,100×3 (3,084×3)	11,100×3 (3,084×3)	11,100×3 (3,084×3)
61	62	62
61	62	63
80	80	80
3.9×3	3.9×3	3.9×3
Blue fin	Blue fin	Blue fin
1,690	1,690	1,690
930×3	930×3	930×3
765	765	765
220+220+220	220+220+220	220+220+220
11.2×3	11.2×3	11.2×3
15.88	15.88	15.88
34.92	34.92	34.92
-5 to 46	-5 to 46	-5 to 46
-20 to 21	-20 to 21	-20 to 21

*2 These are the measured values in the manufacturer's anechoic chamber.
Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.
*3 In case of use multiple outdoor units : -5 to 46

HEAT PUMP TYPE

AIRSTAGE™ J-IIS series

Fujitsu General provides air conditioning systems
for a wide range of applications
from small office buildings and stores to large houses.

System Outline

Space saving and High seasonal efficiency

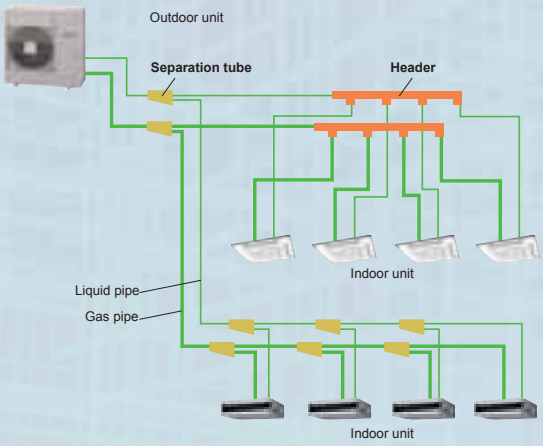
Compact design and high seasonal efficiency are realized by ALL-DC technology, large capacity DC twin rotary compressor, and 3-row heat exchanger .

Flexible systems for homes, shops, small-size buildingss air conditioning

Due to compact size design and flexible piping design, J-IIS series can be installed easily at the place where the installation space is limited such as homes, shops, and small offices. Multiple indoor units of various capacities and types can be connected.

Large Homes

System configuration example



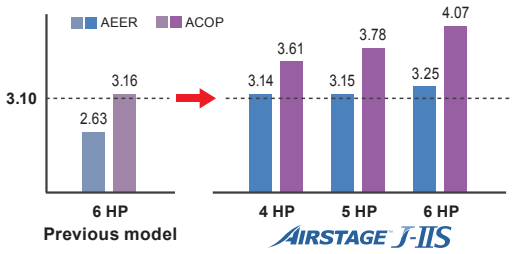
It Can be Easily Carried and Installed Obscure Place

Small and light weight outdoor unit

This model is much more compact than conventional 6HP comparable outdoor units. Even when installed on the balcony it fits within the height of the fence. The compact size with a height of less than 1 m allows it to be installed under windows and in tight spaces

High AEER* and ACOP*

High average cooling and heating efficiency are significantly realized by using All DC inverter control, DC twin rotary compressor, and advanced airflow structure.

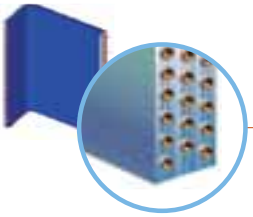


*AEER: Average Energy Efficiency Ratio
*ACOP:Average Coefficiency Of Performance

Advanced high efficiency technology

Large propeller fan
High performance and low noise realized by large propeller and optimization of angle.

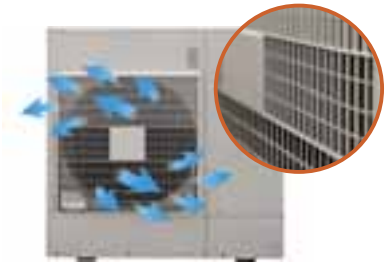
DC fan motor
Miniaturized, low noise, high efficiency, multi-stage DC fan motor is mounted.



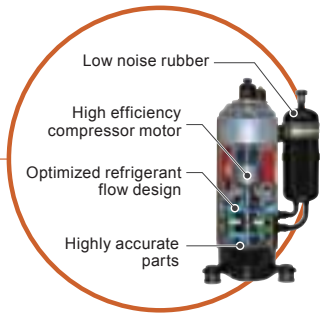
Large heat exchanger
Heat exchange performance is substantially improved by mounting of 3-row large heat exchanger.

High heat transfer copper tube (Improved lead angle)

Smooth airflow grille
This grille was aerodynamically designed for good efficiency with little blow loss.

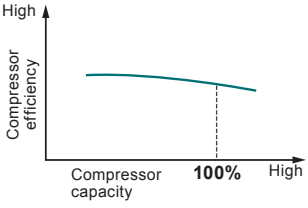


DC inverter control
Efficiency is improved by mounting of new active filter module.



Compact and high performance DC twin rotary compressor

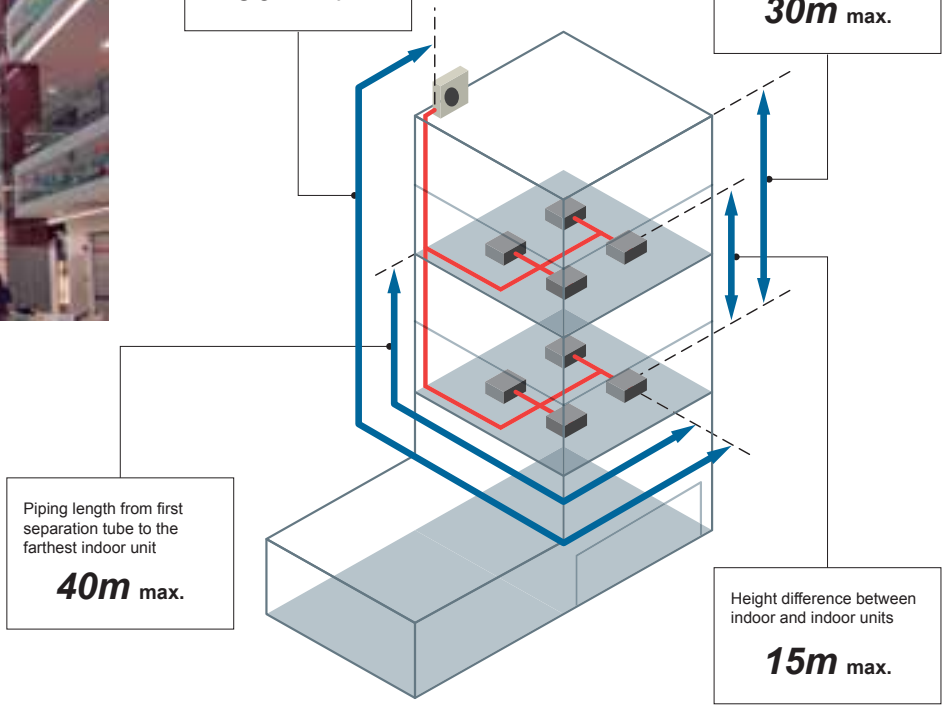
Efficiency in all load regions is good. Especially good performance from low to medium at normal operation.



Long Piping Length

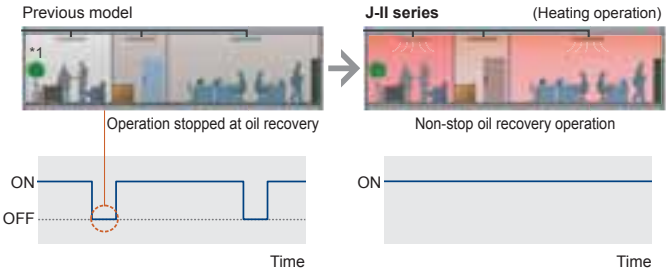
Our advanced refrigerant control technology allows us to achieve a total refrigerant piping length of 80 m. This opens up new possibilities in system design.

Total pipe length
80m max.



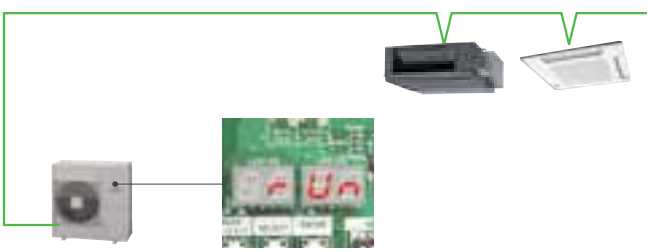
Non-stop oil recovery operation

A comfortable room condition is maintained during oil recovery mode because the product continues to operate without stopping the cooling or heating operation.



Easier Installation

Connection check function : Possible to confirm whether wiring connection and address setting are correct by a quick check run function.



- Display connected indoor unit numbers
- Duplicately set address number of indoor unit can be displayed

Specifications

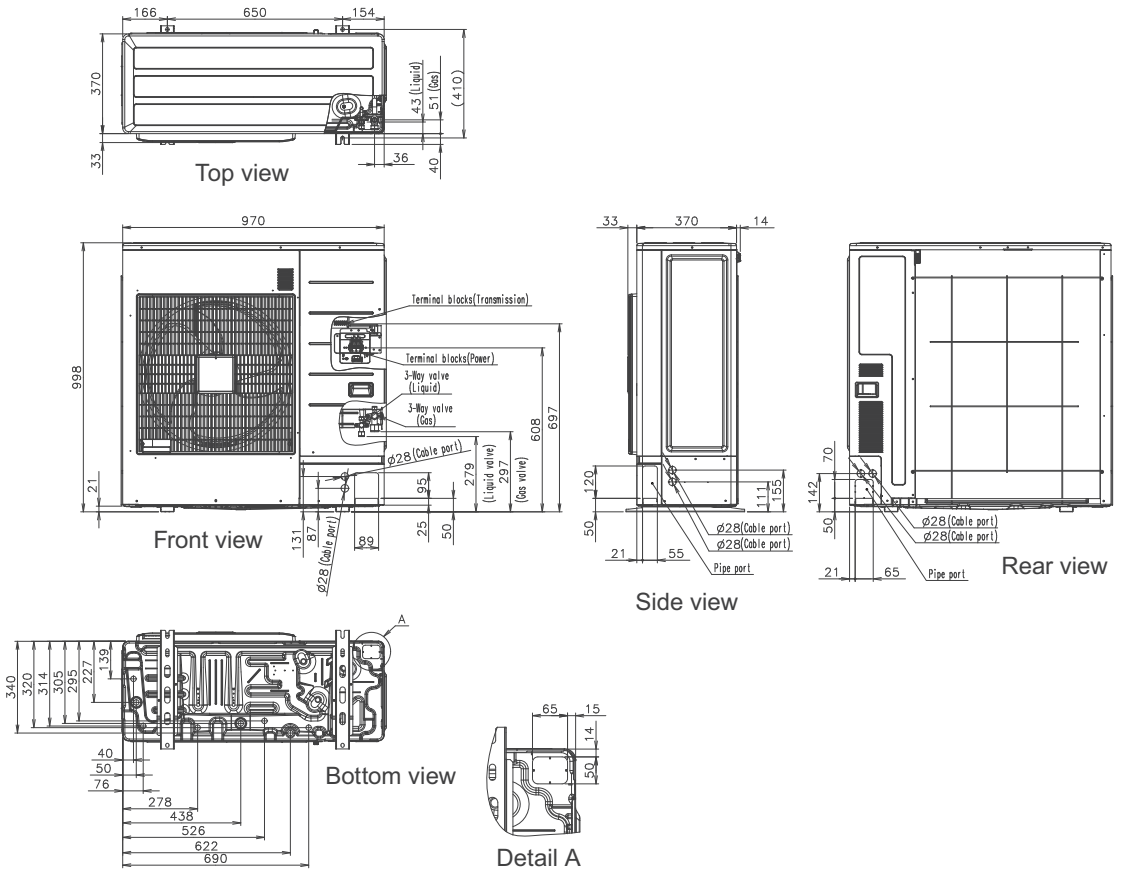
Rating capacity range	HP		4	5	6
Model name			AJT040LCLAH	AJT045LCLAH	AJT054LCLAH
Maximum connectable indoor unit			7	8	8
Power source	V/Ø/Hz		230/1/50	230/1/50	230/1/50
Capacity	Cooling	kW	12.1	14.0	15.1
	Heating		13.6	16.0	16.5
Input power	Cooling	kW	3.44	4.23	4.58
	Heating		3.09	3.93	4.11
EER	Cooling	W/W	3.52	3.31	3.30
COP	Heating		4.40	4.07	4.01
Airflow rate	Cooling	m^3/h (l/s)	4,040 (1,122)	4,200 (1,167)	4,540 (1,261)
	Heating		4,040 (1,122)	4,200 (1,167)	4,200 (1,167)
Sound Pressure level	Cooling	dB (A)	51	53	56
	Heating		54	55	56
Heat exchanger fin			Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	998	998	998
	Width	mm	970	970	970
	Depth	mm	370	370	370
Weight		kg	86	86	87
Connection Pipe diameter	Liquid	mm	ø9.52	ø9.52	ø9.52
	Gas		ø15.88	ø15.88	ø15.88
Total pipe length		m	80	80	80
Max. Height difference			30	30	30
Operation Range	Cooling	˚C	-5 to 46	-5 to 46	-5 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
These are the measured values in the manufacturer's anechoic chamber.
Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Dimensions

Model : AJT040LCLAH / AJT045LCLAH / AJT054LCLAH

(Unit : mm)



HEAT PUMP TYPE

AIRSTAGE™ J-II series

Fujitsu General provides air conditioning systems
for a wide range of applications
from small office buildings and stores to large houses.

System Outline

High Energy Efficiency

Heat pump inverter control is used to achieve an efficient cooling and heating operation in any indoor unit combination.

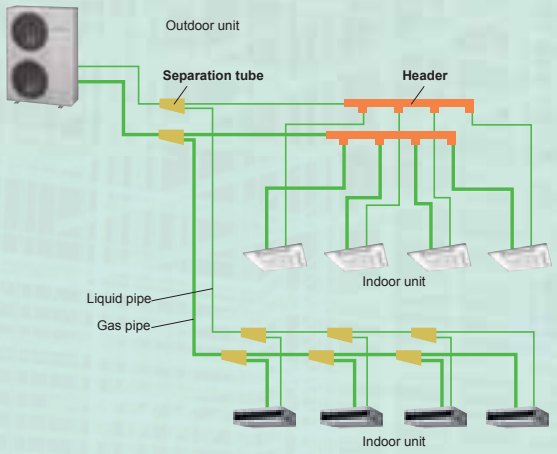
Flexible systems for small- and medium-size buildings air conditioning

Space saving design and long piping design allow for flexible installation on the roofs or balconies of small- and medium-size buildings.
Multiple indoor units of various capacities and types can be connected.

Small Office

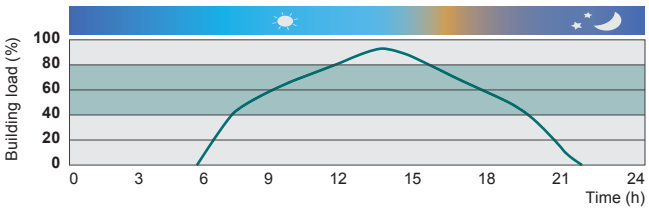
System configuration example

- This system is used for small and medium-sized buildings. 1 refrigerant system is used for each outdoor unit.
- Connection of multiple indoor units using separation tubes and headers.

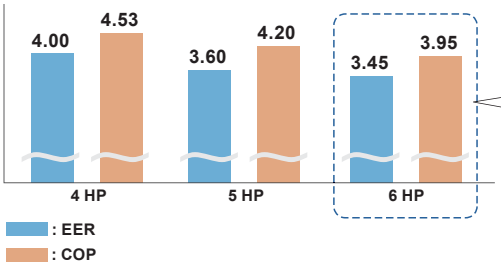


The building load is in the range of 40 % to 80%. Therefore, most air conditioners do not operate at maximum load, but operate at low to medium loads. Especially, for multi system, operation performance at partial load is important because air conditioners do not always operate at full load all the time. Aiming at energy saving performance matched to actual operation, Fujitsu General has developed a high performance air conditioner corresponding not only during the rated performance at 100% load, but also at low to medium load

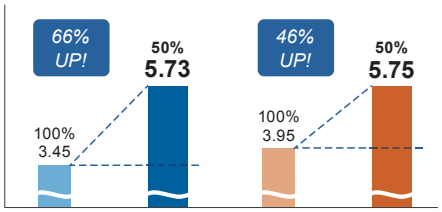
Load curve (a typical office building)



High EER / COP



High part load performance (6HP class)

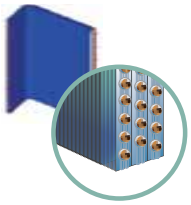


Conditions :
Connected indoor units: AUXA30GALH + AUXD24GALH
Cooling: indoor temp. of 27°CDB / 19°CWB, outdoor temp. of 35°CDB / 24°CWB
Heating: indoor temp. of 20°CDB / 15°CWB, outdoor temp. of 7°CDB / 6°CWB

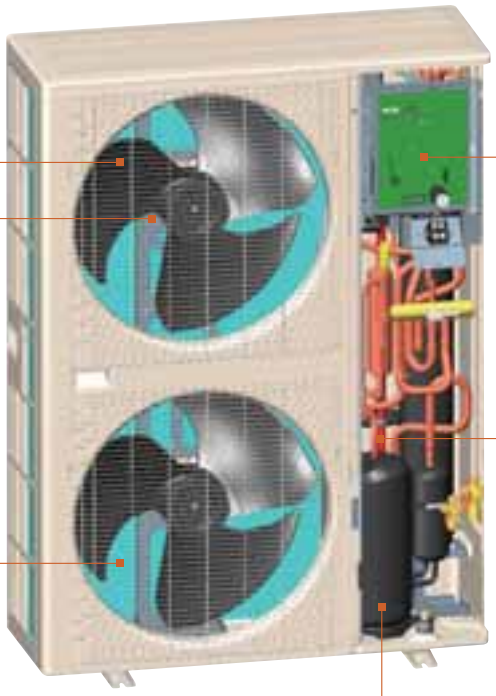
Advanced high efficiency technology

Large propeller fan
High performance and low noise realized by large propeller and optimization of angle.

DC fan motor
Miniaturized, low noise, high efficiency, multi-stage DC fan motor is mounted.

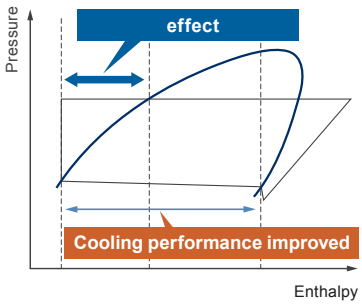


Large heat exchanger
Heat exchange performance is substantially improved by mounting of 3-row large heat exchanger.



DC inverter control
Efficiency is improved by mounting of new active filter module.

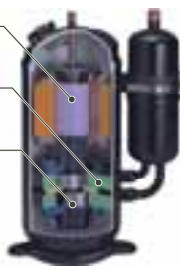
Subcool heat exchanger
Cooling performance is improved by mounting of dual tube heat exchanger.



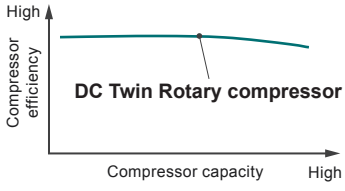
High efficiency compressor motor

Optimized refrigerant flow design

Highly accurate parts



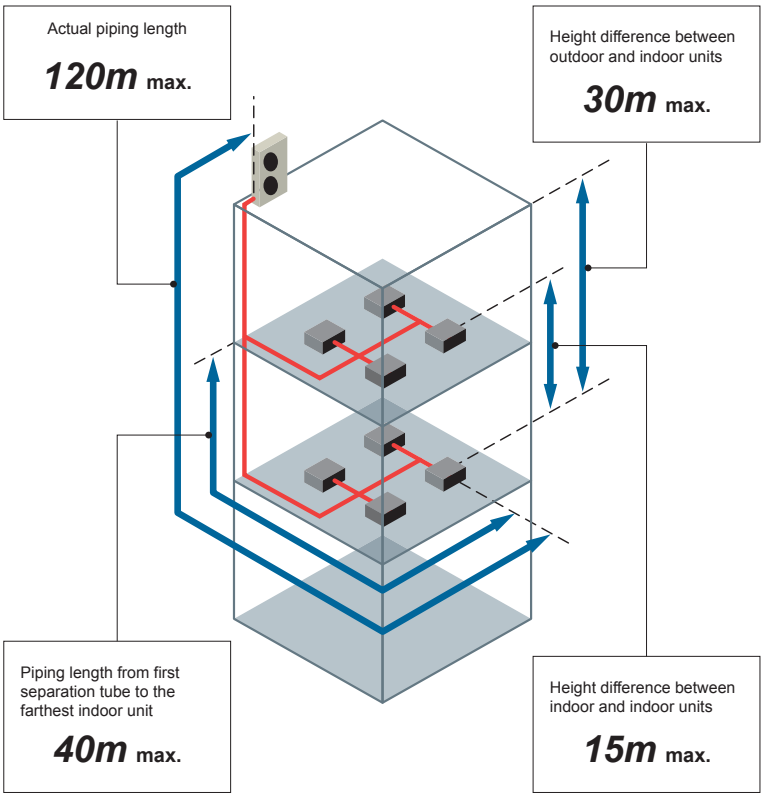
DC twin rotary compressor
Efficiency in all load regions is good. Especially good performance from low to medium at normal operation.



Long Piping Length

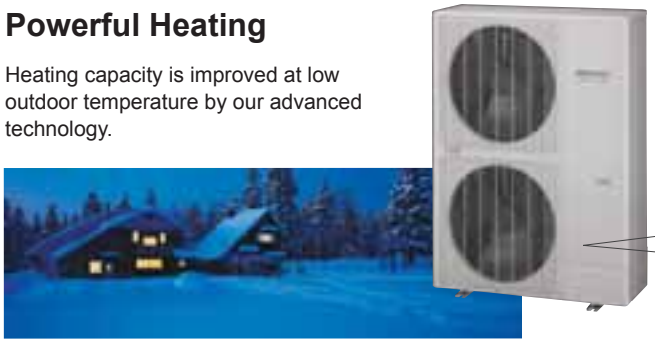
Our advanced refrigerant control technology allows us to achieve a total refrigerant piping length of 180 m. This opens up new possibilities in system design.

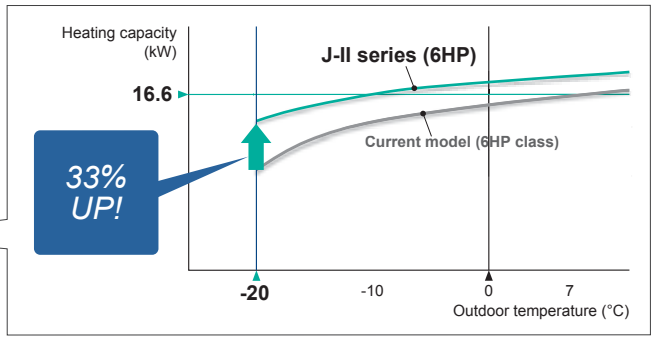
Total pipe length
180m max.



Powerful Heating

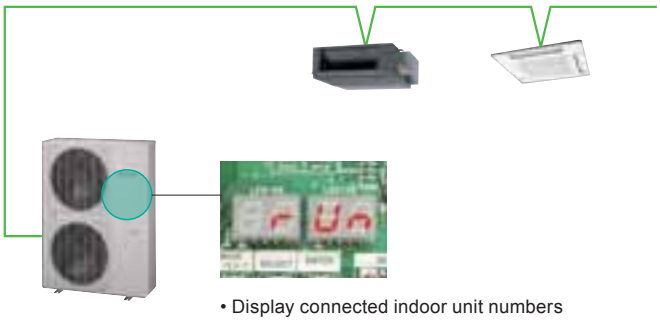
Heating capacity is improved at low outdoor temperature by our advanced technology.





Easier Installation

Connection check function : Possible to confirm whether wiring connection and address setting are correct by a quick check run function.



- Display connected indoor unit numbers
- Duplicately set address number of indoor unit can be displayed

Specifications

Rating Capacity range		HP	4	5	6
Model name			AJYA36LALH	AJYA45LALH	AJYA54LALH
Maximum Connectable Indoor Unit			6	8	9
Power source			Single-phase, ~230V, 50Hz	Single-phase, ~230V, 50Hz	Single-phase, ~230V, 50Hz
Capacity	Cooling	kW	11.2	14.0	15.5
	Heating		12.5	16.0	18.0
Input power	Cooling	kW	2.80	3.89	4.49
	Heating		2.76	3.81	4.56
EER	Cooling	W/W	4.00	3.60	3.45
COP	Heating		4.53	4.20	3.95
Air flow rate		m^3/h (l/s)	6,200 (1,722)	6,400 (1,778)	6,900 (1,916)
Sound pressure level	Cooling	dB (A)	50	51	53
	Heating		52	53	55
Heat exchanger fin			Blue fin	Blue fin	Blue fin
Dimensions	Height	mm	1,334	1,334	1,334
	Width	mm	970	970	970
	Depth	mm	370	370	370
Weight	kg		117	117	117
Refrigerant charge	kg		4.8	5.3	5.3
Connection pipe diameter	Liquid	mm	ø9.52	ø9.52	ø9.52
	Gas		ø15.88	ø15.88	ø19.05
Operation range	Cooling	˚C	-5 to 46	-5 to 46	-5 to 46
	Heating		-20 to 21	-20 to 21	-20 to 21

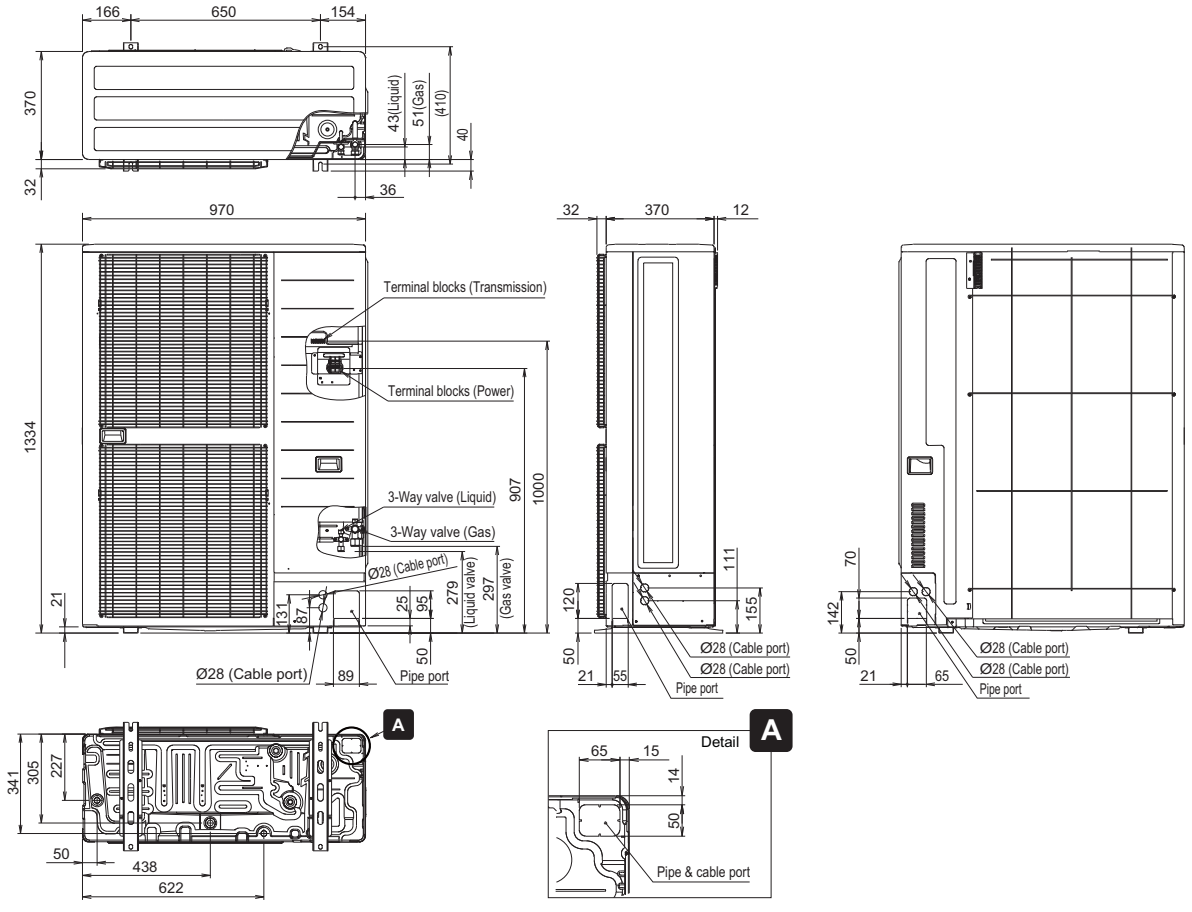
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27°CDB / 19°CWB, and outdoor temperature of 35°CDB / 24°CWB.
Heating : Indoor temperature of 20°CDB / (15°CWB), and outdoor temperature of 7°CDB / 6°CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
These are the measured values in the manufacturer's anechoic chamber.
Because of the surrounding sound environment, the sound levels measured in actual installation conditions might be higher than the specified values here.

Dimensions

Model : AJYA36LALH / AJYA45LALH / AJYA54LALH

Dimensions

(Unit : mm)



INDOOR UNITS

12 Types and 55 models available to meet the requirements of any building design.

The AIRSTAGE indoor units were developed to be highly efficient, compact, low noise and to have user friendly operation. With a variety of indoor units and capacities available, Fujitsu have an indoor unit to match any requirement which is easy to install and maintain.
Further, a variety of options are available to achieve an air conditioning environment that is more desirable from the user's perspective.

COMPACT CASSETTE

LOW STATIC PRESSURE DUCT / CONCEALED FLOOR

SLIM DUCT / SLIM CONCEALED FLOOR

MEDIUM STATIC PRESSURE DUCT

HIGH STATIC PRESSURE DUCT

FLOOR / CEILING

WALL MOUNTED (EEV INTERNAL / EXTERNAL)

AIRSTAGE™

Compact Cassette

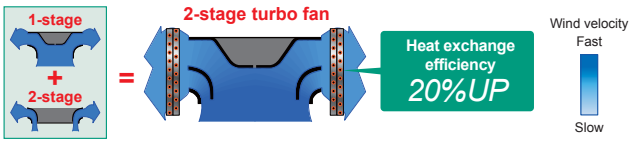
Models
AUXB07GALH
AUXB09GALH
AUXB12GALH
AUXB14GALH
AUXB18GALH
AUXB24GALH

Compact size panel design
that fits standard ceiling panel (600x600mm)

2-stage turbo fan

High efficiency design by 2 stage structure

An evenly spread air distribution across the heat exchanger is possible due to the new 2 stage turbo fan which produces two separate airflow streams.

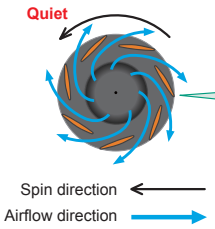


Previous turbo fan
In the case of a previous fan, the air outlet range was narrow as the airflow moved to the motor side which meant the velocity of air passing through the heat exchanger was uneven.

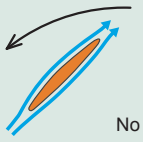
Quiet quality

Optimization of wing form (laminar wing type) and wing number (7 blades each)
Designed by CFD-analysis (fluid) simulations

Adoption of laminar wing



Laminar wing
Airflow runs through smoothly along the laminar wing



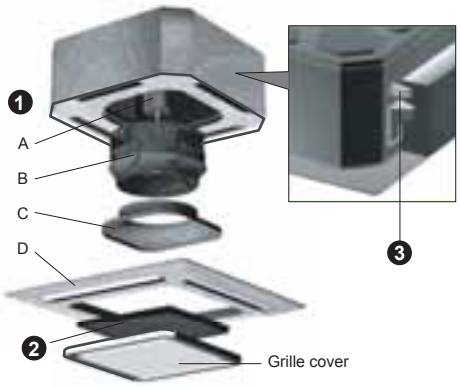
Quiet
No airflow separation

Specifications

Model name			AUXB07GALH	AUXB09GALH	AUXB12GALH	AUXB14GALH	AUXB18GALH	AUXB24GALH
Power source			230V ~, 50Hz					
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating		2.8	3.2	4.1	5.0	6.3	8.0
Input power		W	25	25	29	35	36	84
Airflow rate	High	m³/h (l/s)	540 (150)	550 (153)	600 (167)	680 (189)	710 (197)	1,030 (286)
	Med		450 (125)	450 (125)	530 (147)	590 (164)	580 (161)	830 (231)
	Low		350 (97)	350 (97)	390 (108)	390 (108)	400 (111)	450 (125)
Sound pressure level	High	dB(A)	34	35	37	38	41	50
	Med		30	30	34	34	35	44
	Low		25	25	27	27	27	30
Dimensions (H x W x D)		mm	245 x 570 x 570					
Weight		kg	15				17	
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø9.52	
	Gas (Flare)		ø12.70				ø15.88	
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]					
Cassette Grille	Model name		UTG-UFYC-W					
	Dimensions (H x W x D)	mm	50 x 700 x 700					
	Weight	kg	2.6					

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m. Voltage : 230 [V].

Improvement of the airflow distribution



❶ Maintenance of fan motor and fan

Maintenance of the fan motor and fan can be done easily after taking off the panel as the bell mouth of the fan can be removed easily.

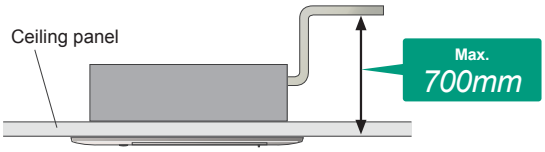
A : Fan motor B : 2-stage turbo fan
C : Bell-mouth D : Panel

❷ Air filter : standard equipment

❸ Adaptation of transparent drainage parts

During installation, maintenance and operation, the drain pump and kit can be checked easily.

High lift drain pump



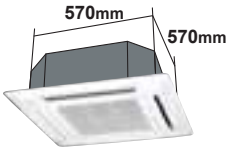
High ceiling mode

The compact cassette can be installed up to a height of 3.0m (12/14/18/24).

Model code	The maximum height from floor to ceiling (m)	
	Standard mode	**High ceiling mode**
07	2.7	—
09	2.7	—
12	2.7	3.0
14	2.7	3.0
18	2.7	3.0
24	2.7	3.0

Compact design

Worlds first 24,000Btu model in the compact cassette category
(Easy installation by taking off ceiling panel of 600 x 600 size)

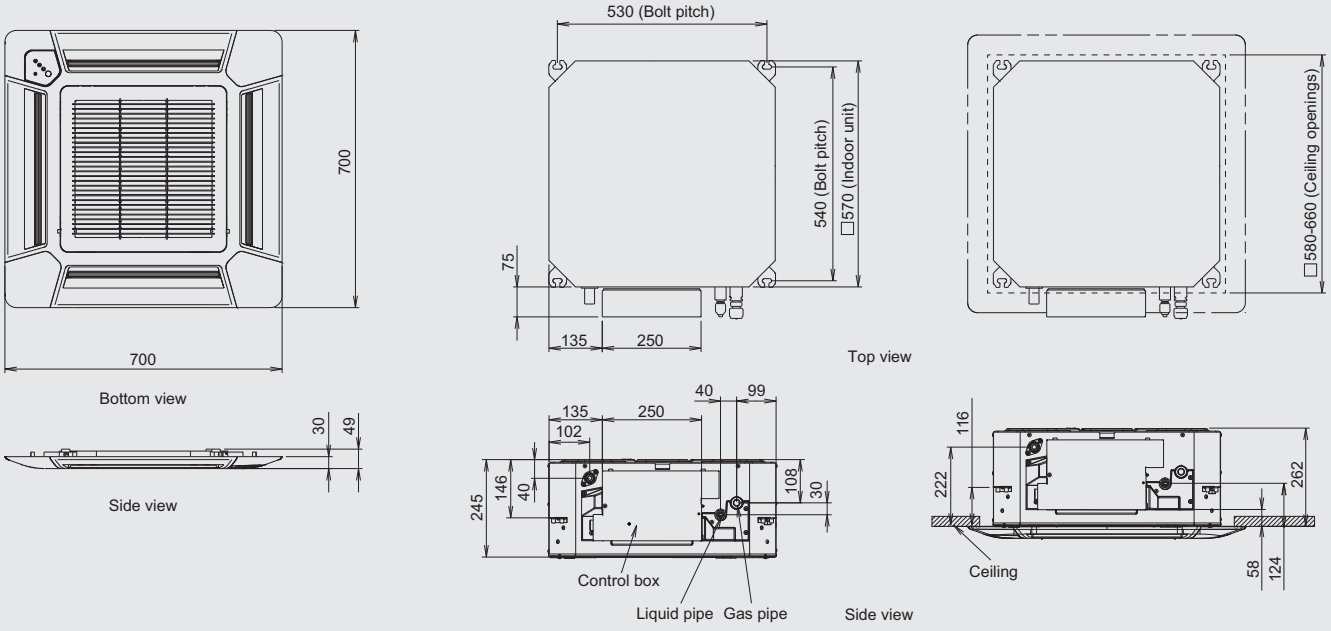


Optional parts

Air Outlet Shutter Plate : UTR-YDZB
Insulation Kit for High Humidity : UTZ-KXGC
Fresh Air Intake Kit : UTZ-VXAA

Dimensions (Unit : mm)

Models: AUXB07 / AUXB09 / AUXB12 / AUXB14 / AUXB18 / AUXB24



Cassette

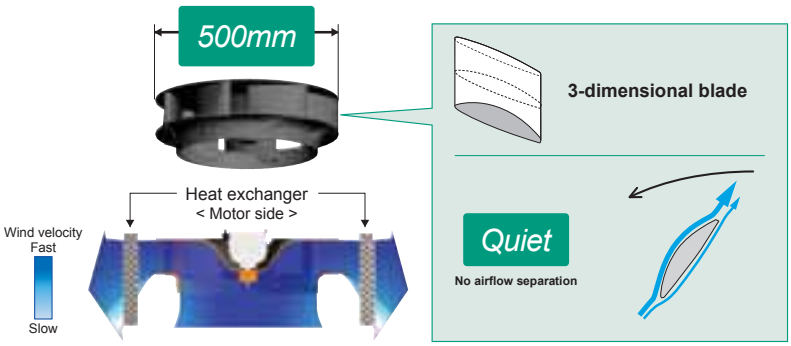
Models

AUXD18GALH
AUXD24GALH
AUXA30GALH
AUXA34GALH NEW
AUXA36GALH
AUXA45GALH
AUXA54GALH

Powerful, wide airflow and quiet operation

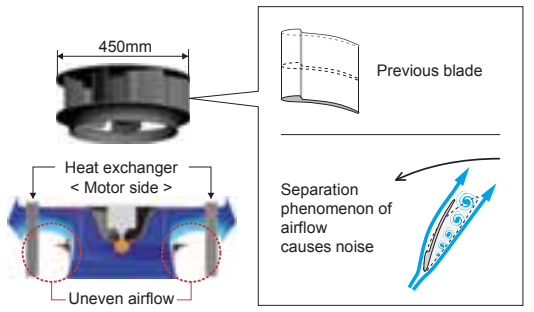
High efficiency turbo fan with 3-dimensional blade

High efficiency airflow distribution has been achieved by the introduction of a 3 dimensional blade which increases the air passing over the heat exchanger.



Previous turbo fan

Air passing through the heat exchanger was uneven and the air would only flow close to the ceiling.



: Spin direction : Airflow direction : Turbulent flow noise

Specifications

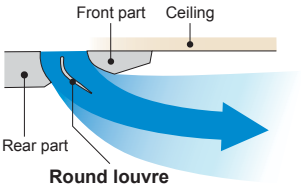
Model name			AUXD18GALH	AUXD24GALH	AUXA30GALH	AUXA34GALH	AUXA36GALH	AUXA45GALH	AUXA54GALH
Power source			230V ~, 50Hz						
Capacity	Cooling	kW	5.6	7.1	9.0	10.0	11.2	12.5	14.0
	Heating		6.3	8.0	10.0	11.2	12.5	14.0	16.0
Input power		W	39	46	59	77	80	99	119
Airflow rate	High	m^3/h (l/s)	1,150 (319)	1,280 (356)	1,600 (444)	1,750 (486)	1,800 (500)	1,900 (528)	2,000 (556)
	Med		940 (261)	1,040 (289)	1,300 (361)	1,300 (361)	1,300 (361)	1,370 (381)	1,370 (381)
	Low		870 (242)	870 (242)	1,100 (306)	1,100 (306)	1,100 (306)	1,100 (306)	1,100 (306)
Sound pressure level	High	dB(A)	36	38	40	43	44	46	47
	Med		30	33	38	38	38	39	39
	Low		29	29	33	33	33	33	33
Dimensions (H x W x D)		mm	246 x 840 x 840		288 x 840 x 840				
Weight		kg	22		27				
Connection pipe diameter	Liquid (Flare)	mm	ø9.52						
	Gas (Flare)		ø15.88				ø19.05		
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]						
Cassette Grille	Model name		UTG-UGYA-W						
	Dimensions (H x W x D)	mm	50 x 950 x 950						
	Weight	kg	5.5						

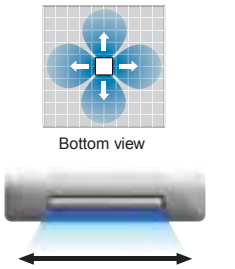
Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m. Voltage : 230 [V].

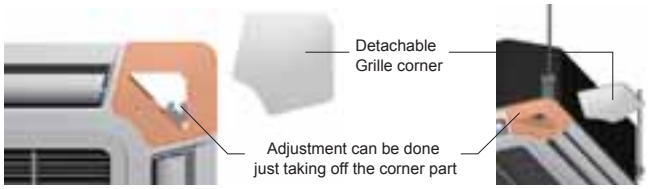
Improvement of the airflow distribution

The louvre design distributes air leaving a space between the chassis and the ceiling allowing far and wide air flow distribution.

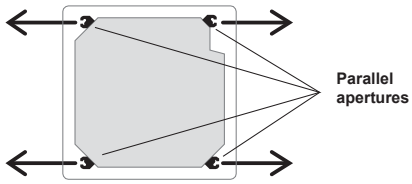




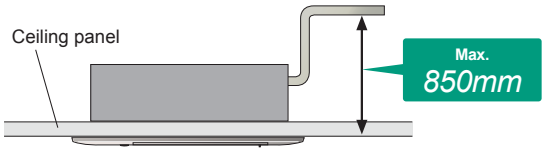
Adjustment of hanger position is possible after installation



One way installation



High lift drain pump



High ceiling mode

This cassette can be installed up to a height of 4.2m (36/45/54).

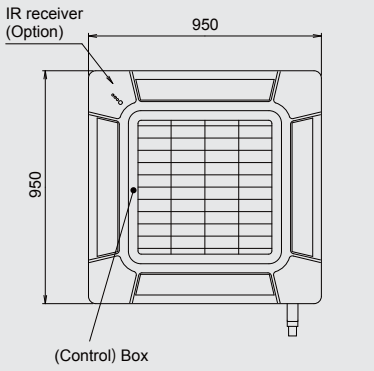
Model code	The maximum height from floor to ceiling (m)	
	Standard mode	**High ceiling mode**
18	3.0	3.5
24	3.0	3.5
30	3.2	3.6
34	3.2	3.6
36	3.2	4.2
45	3.2	4.2
54	3.2	4.2

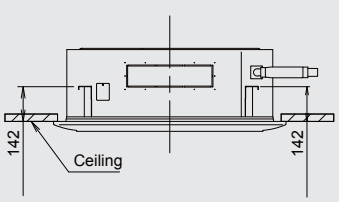
Optional parts

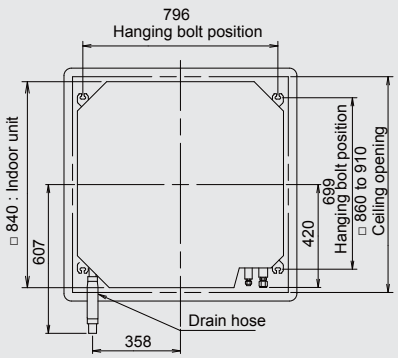
IR Receiver Unit :	UTY-LRHYB1
Air Outlet Shutter Plate :	UTR-YDZC
Panel Spacer :	UTG-BGYA-W
Insulation Kit for High Humidity :	UTZ-KXGA / UTZ-KXGB
Wide Panel :	UTG-AGYA-W
Fresh Air Intake Kit :	UTZ-VXGA

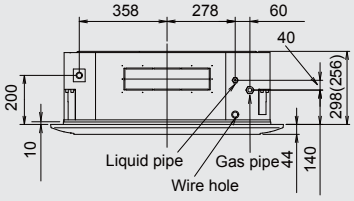
Dimensions (Unit : mm) ( ) : AUXD18 / AUXD24

Models: AUXD18 / AUXD24 (Slim type)
AUXA30 / AUXA34 / AUXA36 / AUXA45 / AUXA54









Low Static Pressure Duct / Concealed Floor

Models

ARXB07GALH
ARXB09GALH
ARXB12GALH
ARXB14GALH
ARXB18GALH

ARXB07GALH
ARXB09GALH

ARXB12GALH
ARXB14GALH
ARXB18GALH

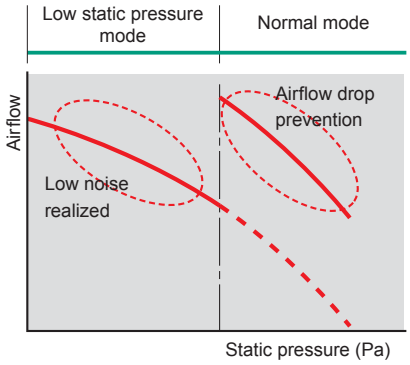
Small and compact indoor unit suitable for many applications

Concealed Floor

Low noise level

A low noise level has been achieved for each capacity

Model		7	9	12	14	18
Static pressure range	Pa	0 to 50				
Noise level (Low speed)	dB(A)	24	27	25	30	30



Specifications

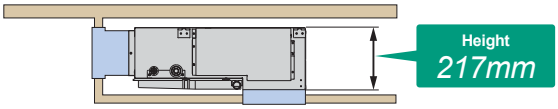
Model name			ARXB07GALH	ARXB09GALH	ARXB12GALH	ARXB14GALH	ARXB18GALH
Power source			230V ~, 50Hz				
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6
	Heating		2.8	3.2	4.0	5.0	6.3
Input power		W	46	55	63	90	96
Airflow rate	High	m^3/h (l/s)	370 (103)	440 (122)	590 (164)	800 (222)	890 (247)
	Med		310 (86)	370 (103)	500 (139)	750 (208)	810 (225)
	Low		280 (78)	340 (94)	450 (125)	700 (194)	730 (203)
Static pressure range		Pa	0 to 50	0 to 50	0 to 50	0 to 50	0 to 50
Standard static pressure			25	25	25	25	25
Sound pressure level	High	dB(A)	29	31	30	33	36
	Med		26	29	28	32	34
	Low		24	27	25	30	30
Dimensions (H x W x D)		mm	217 x 663 x 595		217 x 953 x 595		
Weight		kg	15		22		23
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø9.52
	Gas (Flare)		ø12.70				ø15.88
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]				

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

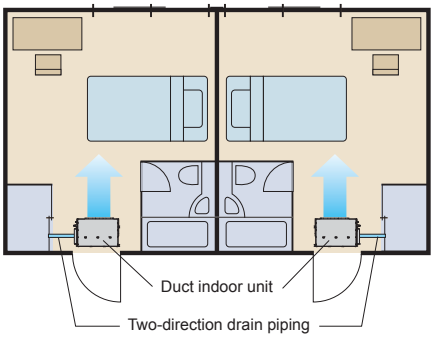
Compact design

Ultra-slim duct air conditioner for easy installation



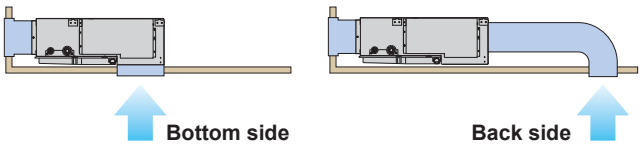
Slim size (217mm) allows installation even where the space above the ceiling is narrow.

Two-direction drain piping



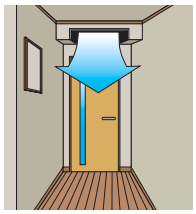
Air-intake

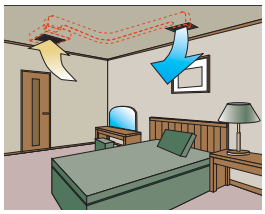
Air intake direction can be selected to match the installation site.



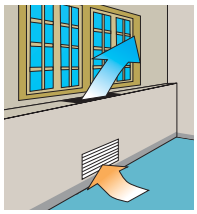
Flexible installation

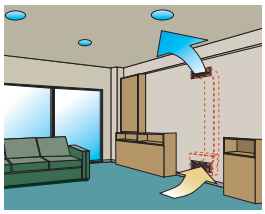
Ceiling concealed





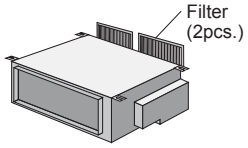
Floor concealed



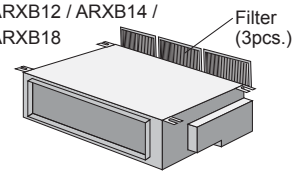


Filter (Accessory)

ARXB07 / ARXB09



ARXB12 / ARXB14 / ARXB18



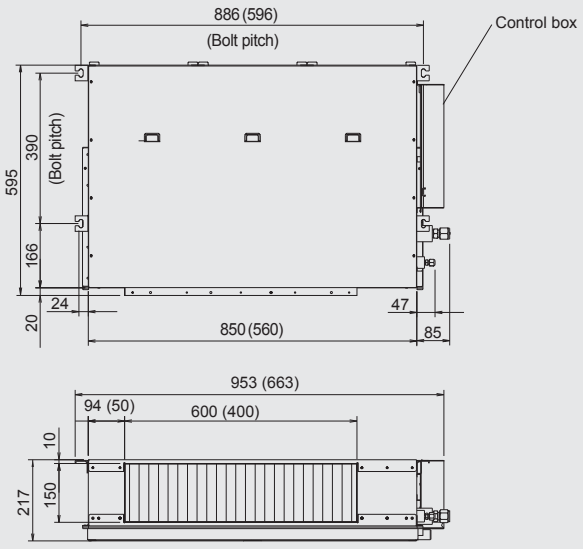
Optional parts

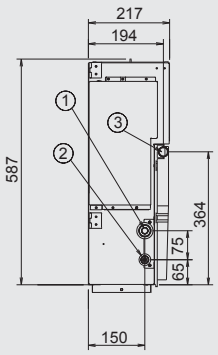
Remote Sensor Unit : UTD-RS100
IR Receiver Unit : UTB-TWC
Drain Pump Unit : UTZ-PX1BBA

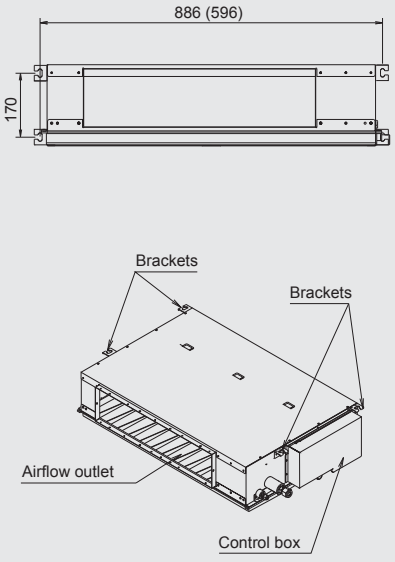
Dimensions (Unit : mm) ( ) : AR7 / AR9

Models: ARXB07 / ARXB09 / ARXB12 / ARXB14 / ARXB18

*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.







① Refrigerant piping flare connection (Gas)
② Refrigerant piping flare connection (Liquid)
③ Drain piping connection

Slim Duct / Slim Concealed Floor

Models (Drain pump internal model)

ARXD07GALH
ARXD09GALH
ARXD12GALH
ARXD14GALH
ARXD18GALH
ARXD24GALH

Slim design and wide range of static pressure for flexible installation.

ARXD07GALH ARXD12GALH
ARXD09GALH ARXD14GALH

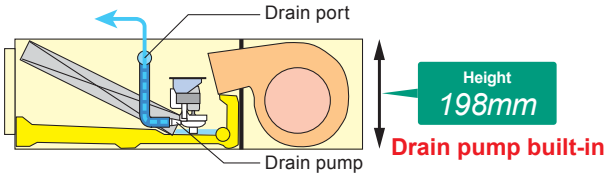
ARXD18GALH

ARXD24GALH

Slim Concealed Floor

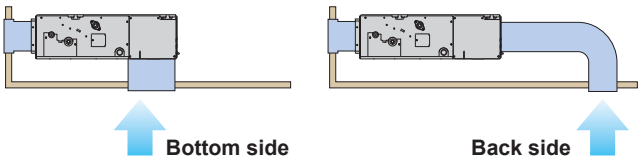
Slim design

With a slim indoor design, this indoor can be installed in narrow ceiling spaces.



Air-intake

Air intake direction can be selected to match the installation site.



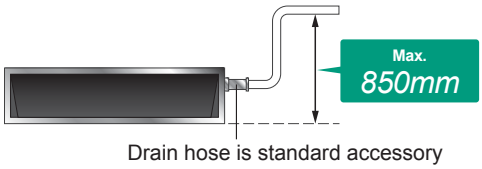
Specifications

Model name			ARXD07GALH	ARXD09GALH	ARXD12GALH	ARXD14GALH	ARXD18GALH	ARXD24GALH
Power source			230V ~, 50Hz					
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	5.6	7.1
	Heating		2.8	3.2	4.0	5.0	6.3	8.0
Input power		W	44	50	54	92	83	122
Airflow rate	High	m^3/h (l/s)	550 (153)	600 (167)	600 (167)	800 (222)	940 (261)	1,330 (369)
	Med		490 (136)	550 (153)	510 (142)	710 (197)	840 (233)	1,240 (344)
	Low		440 (122)	480 (133)	450 (125)	610 (169)	750 (208)	1,100 (306)
Static pressure range		Pa	0 to 90	0 to 90	0 to 90	0 to 90	0 to 90	0 to 50
Standard static pressure			25	25	25	25	25	25
Sound pressure level	High	dB(A)	28	29	30	34	34	35
	Med		25	26	27	32	32	32
	Low		22	24	24	28	28	29
Dimensions (H x W x D)		mm	198 x 700 x 620				198 x 900 x 620	198 x 1,100 x 620
Weight		kg	17		18		22	26
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø9.52	
	Gas (Flare)		ø12.70				ø15.88	
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]					

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

High lift drain pump



Drain hose is standard accessory

Selectable with a wide range of static pressure

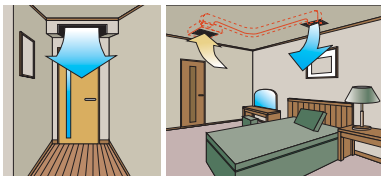
By using DC fan motor, it is possible to change of static pressure range 0 to 90Pa.
The change of static pressure range is possible by remote controller.

Static pressure range
0 to 90 Pa

*24 model is 0 to 50Pa

Flexible installation

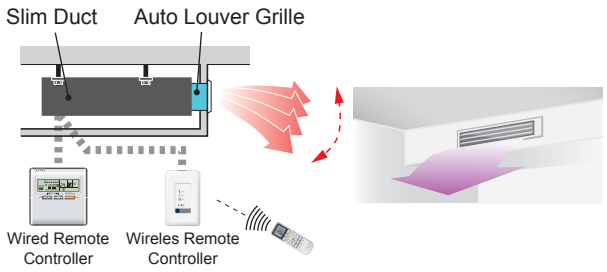
Ceiling concealed



Floor concealed

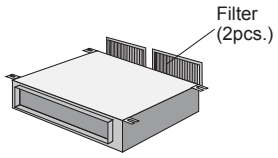
Auto Louver Grille Kit (Option)

Simple flat Auto Louver will provide comfort airflow and harmonize with luxury interior.

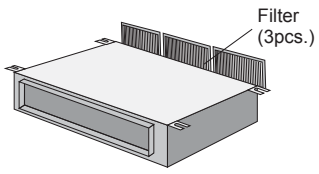


Filter (Accessory)

ARXD07 / 09 / 12 / 14 / 18



ARXD24



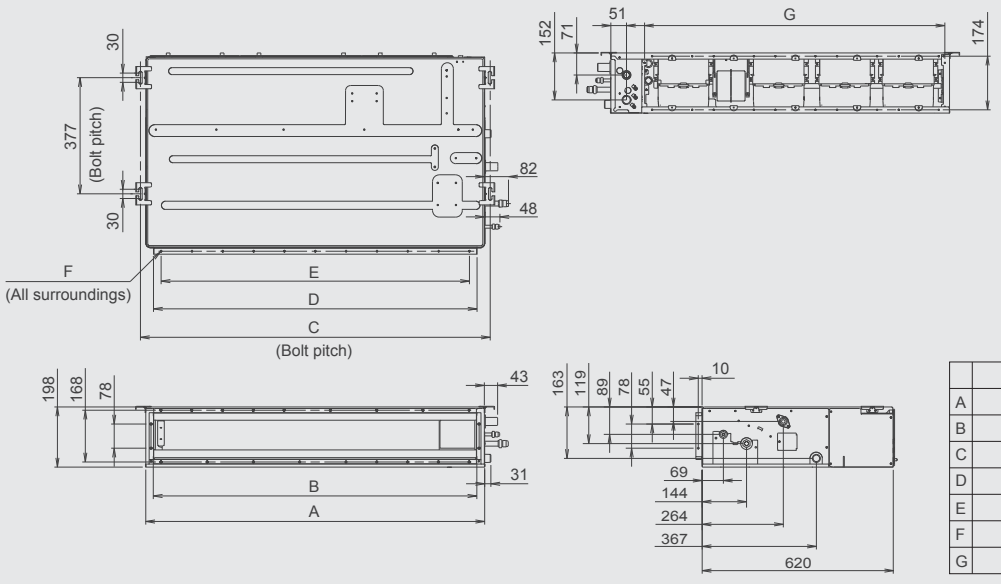
Optional parts

Remote Sensor Unit : UTY-XSZX
IR Receiver Unit : UTB-TWC
Auto Louver Grille Kit : UTD-GXSA-W (for ARXD07/09/12/14GALH)
UTD-GXSB-W (for ARXD18GALH)
UTD-GXSC-W (for ARXD24GALH)

Dimensions (Unit : mm)

Models: ARXD07 / ARXD09 / ARXD12 / ARXD14 / ARXD18 / ARXD24

*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.



	ARXD07-14	ARXD18	ARXD24
A	700	900	1100
B	650	850	1050
C	734	934	1134
D	650	850	1050
E	P100x6=600	P100x8=800	P100x10=1000
F	18xØ5	22xØ5	26xØ5
G	574	774	974

Low / Medium Static Pressure Duct

Models [Low Static Pressure Duct]

ARXB24GALH
ARXB30GALH
ARXB36GALH
ARXB45GALH

Indoor units suitable for quiet rooms such as a hotel or a bedroom

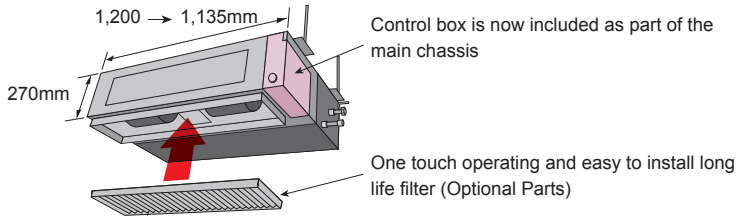
Models [Medium Static Pressure Duct]

ARXA24GALH
ARXA30GALH
ARXA36GALH
ARXA45GALH

Slim Compact design allows for easy installation in narrow ceiling spaces up to 270mm

Slim & Compact design

In the case of bottom return air connection, not only does the indoor unit design allow for installation in a narrow ceiling space of up to 270mm, Further space savings have been achieved by mounting the electrical control box internally inside the chassis.



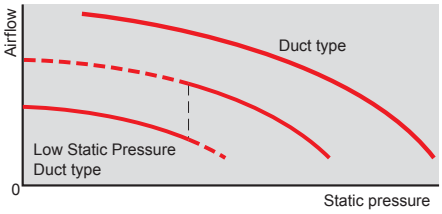
Specifications

Model name			ARXB24GALH	ARXB30GALH	ARXB36GALH	ARXB45GALH	ARXA24GALH	ARXA30GALH	ARXA36GALH	ARXA45GALH
Power source			230V ~, 50Hz				230V ~, 50Hz			
Capacity	Cooling	kW	7.1	9.0	11.2	12.5	7.1	9.0	11.2	12.5
	Heating		8.0	10.0	12.5	14.0	8.0	10.0	12.5	14.0
Input power		W	145	198	253	338	190	188	312	312
Airflow rate	High	m^3/h (l/s)	1,100 (306)	1,410 (392)	1,710 (475)	1,970 (547)	1,280 (356)	1,280 (356)	1,720 (478)	1,720 (478)
	Med		920 (256)	1,280 (356)	1,600 (444)	1,790 (497)	1,210 (336)	1,210 (336)	1,670 (464)	1,670 (464)
	Low		810 (225)	1,150 (319)	1,470 (408)	1,670 (464)	1,130 (314)	1,130 (314)	1,600 (444)	1,600 (444)
Static pressure range		Pa	0 to 80	0 to 80	0 to 80	0 to 80	30 to 150	30 to 150	30 to 150	30 to 150
Standard static pressure			40	50	50	60	100	100	100	100
Sound pressure level	High	dB(A)	31	34	37	41	38	40	43	43
	Med		27	32	35	38	36	38	41	41
	Low		25	29	33	36	34	36	39	39
Dimensions (H x W x D)		mm	270 x 1,135 x 700				270 x 1,135 x 700			
Weight		kg	39	42			39	42		
Connection pipe diameter	Liquid (Flare)	mm	ø9.52				ø9.52			
	Gas (Flare)		ø15.88		ø19.05		ø15.88		ø19.05	
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]				VP25[ø25(I.D.); ø32(O.U.)]			

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

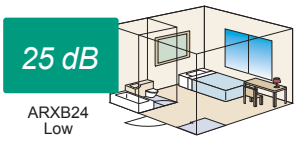
Line-up of low-noise and high-power models, compatible with a wide range of static pressure



Low Static Pressure Duct type

Optimum model for hotels or bedrooms

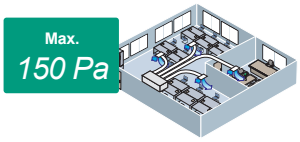
An ultra low-noise model that achieves a quiet interior. Perfect for hotels or bedrooms with limited air duct installation space. Two different levels can be selected according to the static pressure range.



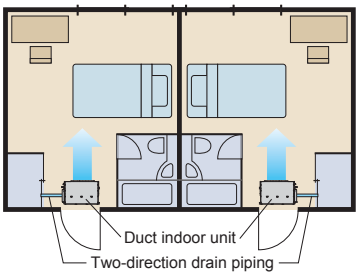
Duct type

Powerful model with a flexible design

With a powerful motor, appropriate for a wide range of static pressure. Flexible air duct installation is possible in a large space such as an office.



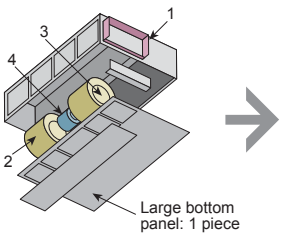
Two-direction drain piping



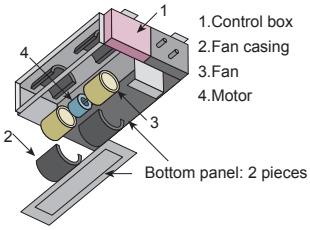
Easy maintenance

See below for the case of rear suction type

Previous model



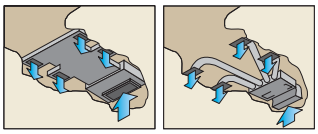
New model



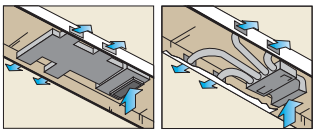
Structural improvement is attained by making the bottom panel two pieces, front and rear. The internal fan casing is also manufactured in two pieces, namely upper and lower. The maintenance of the motor and fan can be easily carried out by removing the rear panel and the lower part of the casing while leaving the main chassis installed.

Installation styles

Embedded in Ceiling



Hanging from Ceiling



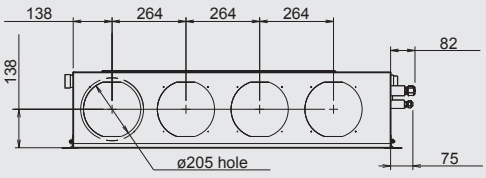
Optional parts

Remote Sensor Unit :	UTD-RS100	Flange (Round) :	UTD-RF204
Long Life Filter :	UTD-LF25NA	IR Receiver Unit :	UTB-TWC
Flange (Square) :	UTD-SF045T	Drain Pump Unit :	UTZ-PX1NBA

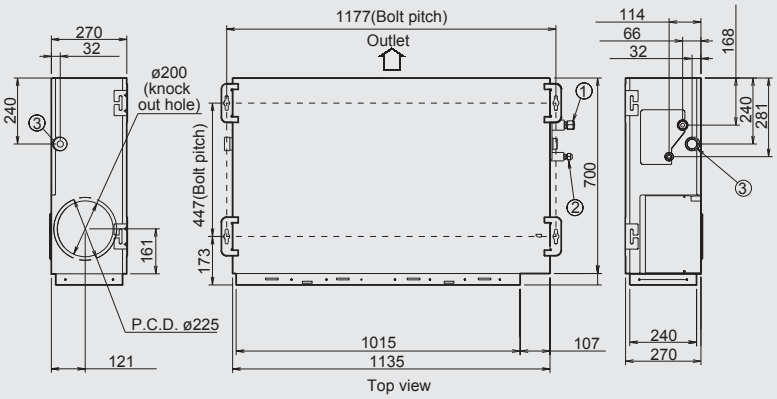
Dimensions (Unit : mm)

Models: ARXB24 / ARXB30 / ARXB36 / ARXB45
ARXA24 / ARXA30 / ARXA36 / ARXA45

*Service accessibility must be allowed for when installing the product.
Please consult the installation manual for the necessary service access size.



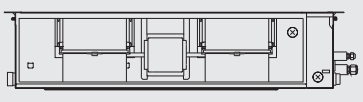
Front view



Side view (L)

Top view

Side view (R)



Rear view

① Refrigerant piping flare connection (Liquid) :
② Refrigerant piping flare connection (Gas) :
③ Drain piping connection (Drain pipe)

High Static Pressure Duct

Models

ARXC36GATH
ARXC45GATH
ARXC60GATH
ARXC72GATH
ARXC90GATH

These indoor units allow for high airflow quantities

ARXC36GATH
ARXC45GATH
ARXC60GATH

ARXC72GATH
ARXC90GATH

Specifications

Model name			ARXC36GATH	ARXC45GATH	ARXC60GATH	ARXC72GATH	ARXC90GATH
Power source			230V ~, 50Hz				
Capacity	Cooling	kW	11.2	12.5	18.0	22.4	25.0
	Heating		12.5	14.0	20.0	25.0	28.0
Input power		W	405	715	730	1,110	1,250
Airflow rate	High	m^3/h (l/s)	2,600 (722)	3,500 (972)	3,500 (972)	3,900 (1,083)	4,300 (1,195)
	Med		1,950 (542)	3,000 (833)	3,000 (833)	3,300 (917)	4,000 (1,111)
	Low		1,450 (403)	2,460 (683)	2,460 (683)	3,000 (833)	3,500 (972)
Static pressure range		Pa	100 to 200	100 to 250	100 to 250	50 to 300	100 to 300
Standard static pressure			100	100	100	260	250
Sound pressure level	High	dB(A)	45	49	49	51	53
	Med		38	45	45	48	51
	Low		32	42	42	45	49
Dimensions (H x W x D)		mm	400 x 1,050 x 500			450 x 1,550 x 700	
Weight		kg	43	46		83	85
Connection pipe diameter	Liquid	mm	ø9.52 (Flare)			ø12.70 (Brazing)	
	Gas		ø19.05 (Flare)			ø22.22 (Brazing)	
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]				

Note : Specifications are based on the following conditions.

Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.

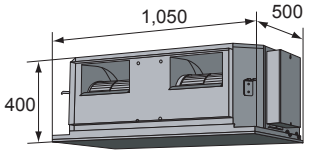
Easy installation (Compact size & Lightweight)

Models : ARXC36

A compact size and lightweight indoor unit has been developed by reducing the basic chassis and the overall material weight.

Volume 47.5% down

Weight 42% down

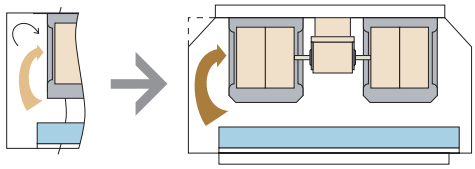


ARXC36GATH : 43kg (unit: mm)

Low noise

Models : ARXC36 / ARXC45 / ARXC60

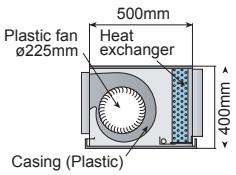
Cutting off the corners of the conventional indoor unit front panel and fan casing, has enabled less turbulent air flow. Low noise is realized by adopting a plastic case and a plastic fan.



Previous model **New model (ARXC36GATH)**

ARXC36GATH : Plastic fan [45dB(A)]

* Model : Material
(At 100Pa : Actual noise measurement value)

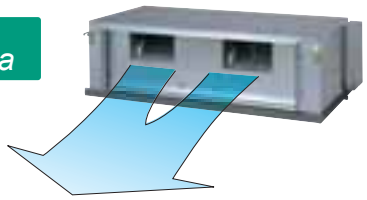


Static pressure selection

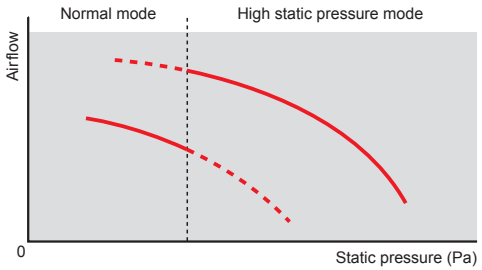
Models : ARXC72 / ARXC90

2 Types of static pressure mode are selectable.

Max. 300Pa



High Static Pressure Duct (ARXC72)



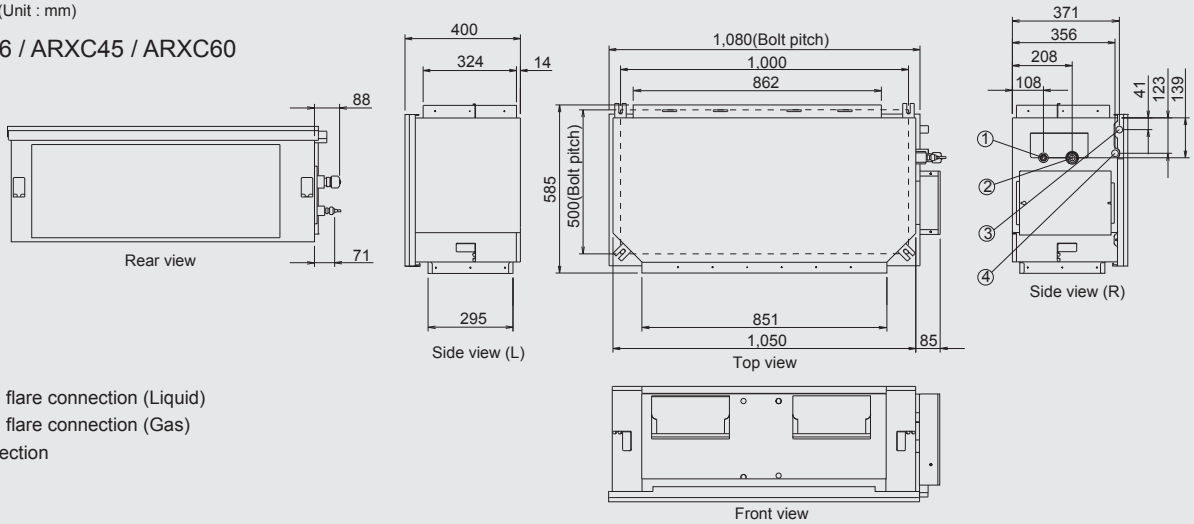
The adoption of a single phase fan motor allows
3 steps fan speed control

Optional parts

Long-Life Filter : UTD-LF60KA (For ARXC36 / 45 / 60)
IR Receiver Unit : UTB-TWC
Remote Sensor Unit : UTD-RS100

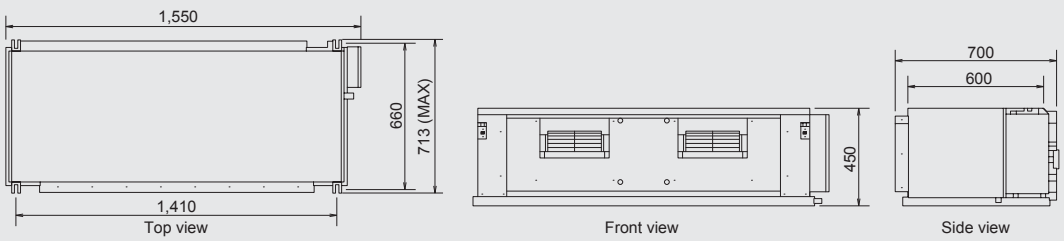
Dimensions (Unit : mm)

Models: ARXC36 / ARXC45 / ARXC60



① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

Models: ARXC72 / ARXC90



Floor / Ceiling

Models

ABYA12GATH
ABYA14GATH
ABYA18GATH
ABYA24GATH

The slim and lightweight design allow the unit to be suspended from the ceiling or installed on the floor.
This type suits many room designs

Floor standing

Flexible installation

Example for floor installation

Floor console

Example for ceiling installation

Under ceiling

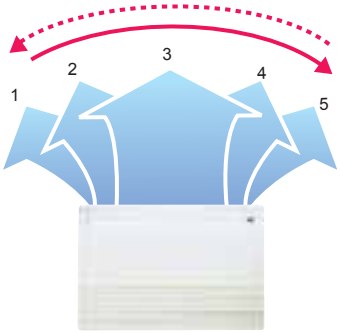
Specifications

Model name			ABYA12GATH	ABYA14GATH	ABYA18GATH	ABYA24GATH
Power source			230V ~, 50Hz			
Capacity	Cooling	kW	3.6	4.5	5.6	7.1
	Heating		4.0	5.0	6.3	8.0
Input power		W	30	42	74	99
Airflow rate	High	m^3/h (l/s)	660 (183)	780 (216)	1,000 (277)	1,000 (277)
	Med		570 (158)	640 (177)	720 (199)	820 (227)
	Low		490 (136)	550 (152)	580 (161)	680 (188)
Sound pressure level	High	dB(A)	36	40	46	47
	Med		32	36	39	42
	Low		28	34	35	37
Dimensions (H x W x D)		mm	199 x 990 x 655			
Weight		kg	25	26	26	27
Connection pipe diameter	Liquid (Flare)	mm	ø6.35		ø9.52	
	Gas (Flare)		ø12.70		ø15.88	
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]			

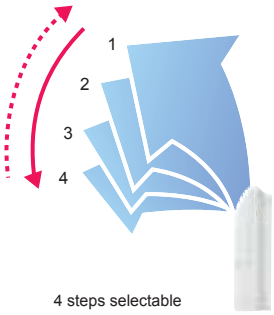
Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

A combination of up/down and right/left directional swing allows three-dimensional air direction control.

RIGHT and LEFT SWING



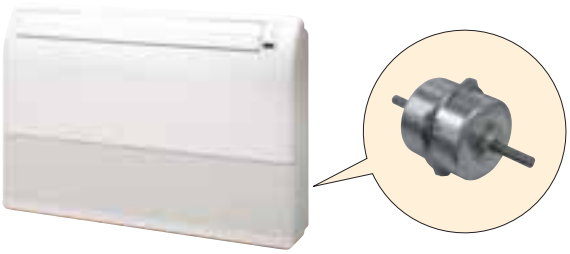
UP and DOWN SWING



4 steps selectable

High power DC fan motor

- High power
- Wide rotation range
- High efficiency



Super vane

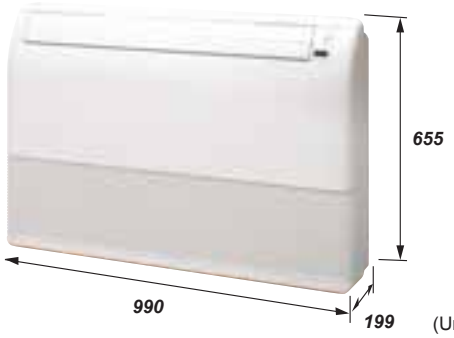
Double Louvre Super vane with newly developed special configuration boosts airflow sending cool air quickly to every corner of the room.

Auto-closing louvre

When operation is stopped, the louvres will automatically close. (This function is available on all non-ducted models.)

Compact design

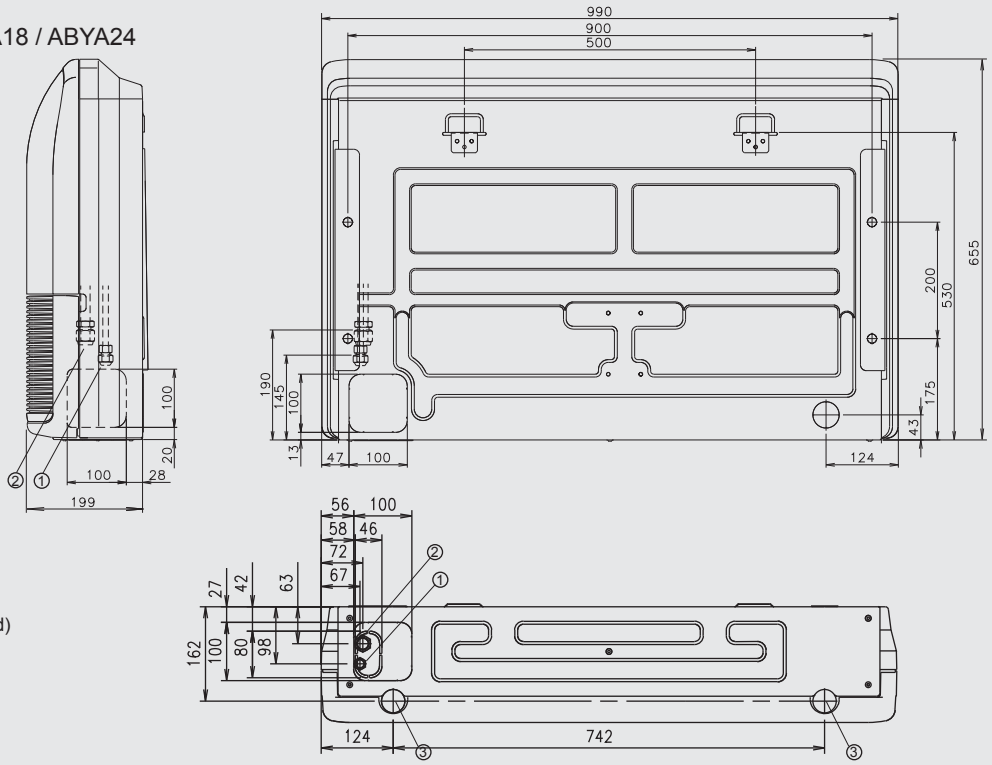
Symmetrical, slim and compact design.



(Unit : mm)

Dimensions (Unit : mm)

Models: ABYA12 / ABYA14 / ABYA18 / ABYA24



① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

Ceiling

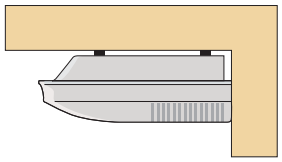
Models

ABYA30GATH
ABYA36GATH
ABYA45GATH
ABYA54GATH

Easily concealed in any installation

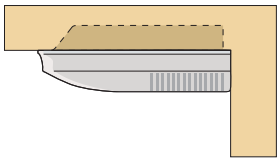
Installation

Open



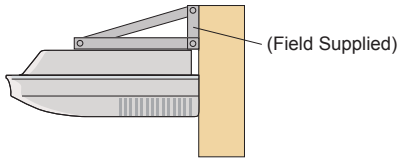
General installation pattern which suspends the indoor unit from the ceiling.

Concealed



Installation pattern where part of the indoor unit is embedded into the ceiling.

Wall mounted



Installation which fixes the indoor unit to the wall by the use of wall brackets (Field supplied). This type of installation can be used when the ceiling space is insufficient.

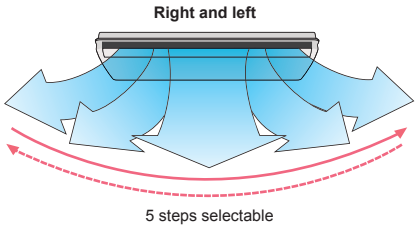
Specifications

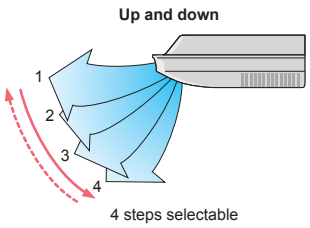
Model name			ABYA30GATH	ABYA36GATH	ABYA45GATH	ABYA54GATH
Power source			230V ~, 50Hz			
Capacity	Cooling	kW	9.0	11.2	12.5	14.0
	Heating		10.0	12.5	14.0	16.0
Input power		W	66	85	131	180
Airflow rate	High	m^3/h (l/s)	1,630 (452)	1,690 (469)	2,010 (558)	2,270 (629)
	Med		1,370 (379)	1,400 (389)	1,600 (444)	1,780 (493)
	Low		1,140 (316)	1,170 (325)	1,230 (342)	1,280 (355)
Sound pressure level	High	dB(A)	42	45	48	51
	Med		38	38	42	45
	Low		33	34	35	36
Dimensions (H x W x D)		mm	240 x 1,660 x 700			
Weight		kg	46	48		
Connection pipe diameter	Liquid (Flare)	mm	ø9.52	ø9.52		
	Gas (Flare)		ø15.88	ø19.05		
	Drain hose		VP25[ø25(I.D.); ø32(O.U.)]			

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

Double auto swing and wide airflow

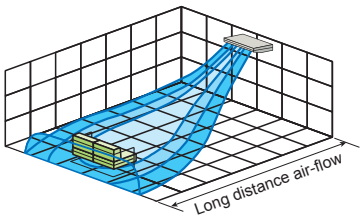
Auto airflow direction and auto swing



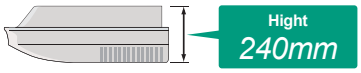


Long airflow

Long Airflow ensures comfort to every corner of a large room.

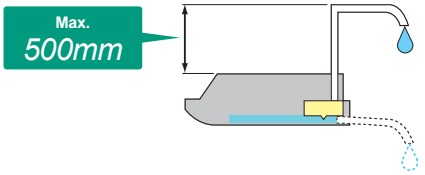


Slim & Compact design

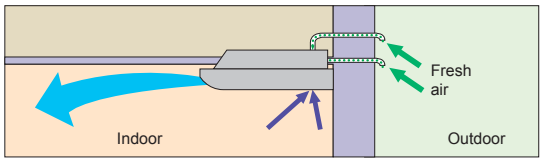


High lift drain pump

Optional drain pump unit allows flexible installation design.

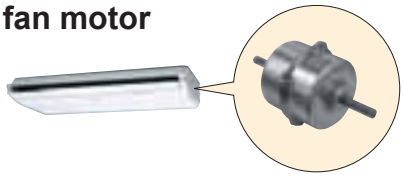


Fresh air intake



High power DC fan motor

- High power
- Wide rotation range
- High efficiency

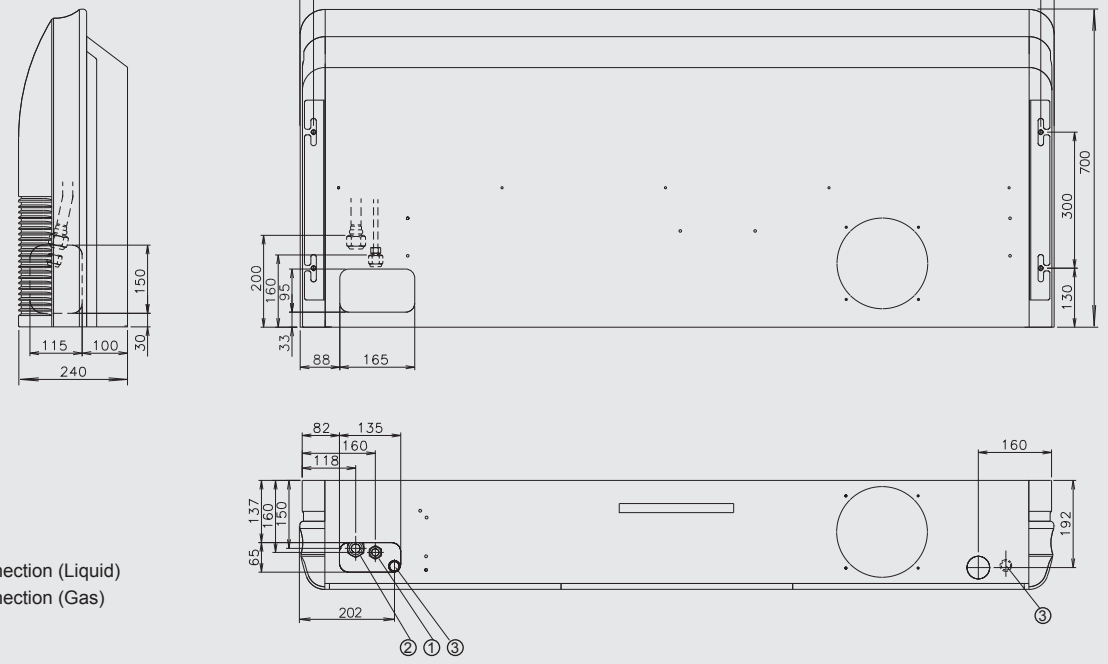


Optional parts

Drain Pump Unit : UTR-DPB24T
Flange : UTD-RF204

Dimensions (Unit : mm)

Models: ABYA30 / ABYA36 / ABYA45 / ABYA54



① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain piping connection

Wall Mounted

Models (EEV internal model)
ASYA07GACH
ASYA09GACH
ASYA12GACH
ASYA14GACH

Models (EEV external model)
ASYE07GACH
ASYE09GACH
ASYE12GACH
ASYE14GACH

Compact and Stylish design indoor

Filter features

High quality air conditioning by incorporation of high performance filter.

Ion Deodorization Filter

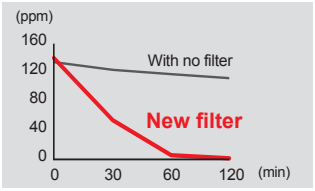
The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra-fine-particle ceramic.

Apple-catechin Filter

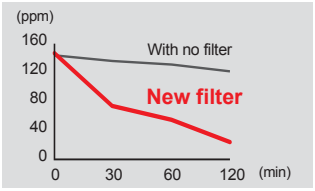
Apple-catechin filter uses static electricity to clean fine particles and dust in the air.

Deodorizing effect (Odor reduction rate)

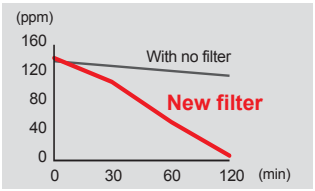
Ammonia



Trimethylamine



Hydrogen sulfate



Testing organization :
Environmental Sanitary Inspection Center
Test method :
Deodorization Test

Specifications

Model name			ASYA07GACH	ASYA09GACH	ASYA12GACH	ASYA14GACH	ASYE07GACH	ASYE09GACH	ASYE12GACH	ASYE14GACH
Power source			230V ~, 50Hz				230V ~, 50Hz			
Capacity	Cooling	kW	2.2	2.8	3.6	4.5	2.2	2.8	3.6	4.5
	Heating		2.8	3.2	4.1	5.0	2.8	3.2	4.1	5.0
Input power		W	17	18	22	34	15	16	21	34
Airflow rate	High	m³/h (l/s)	490 (136)	500 (139)	560 (156)	670 (186)	490 (136)	500 (139)	560 (156)	680 (189)
	Med		450 (125)	450 (125)	480 (133)	490 (136)	450 (125)	450 (125)	480 (133)	490 (136)
	Low		370/420*1 (103/117*1)	370/420*1 (103/117*1)	420 (117)	420 (117)	370/420*1 (103/117*1)	370/420*1 (103/117*1)	420 (117)	420 (117)
Sound pressure level	High	dB(A)	35	36	39	44	34	35	38	43
	Med		33	33	35	37	32	32	34	35
	Low		27/31*1	27/31*1	31	32	26/30*1	26/30*1	30	30
Dimensions (H x W x D)		mm	275 x 790 x 215				275 x 790 x 215			
Weight		kg	9				9			
Connection pipe diameter	Liquid (Flare)	mm	ø6.35				ø6.35			
	Gas (Flare)		ø12.70				ø12.70			
	Drain		ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)				ø13.8(I.D.) ; ø15.8-ø16.7(O.D.)			
EV Kit (option)			—				UTR-EV09XB		UTR-EV14XB	

Note : Specifications are based on the following conditions.

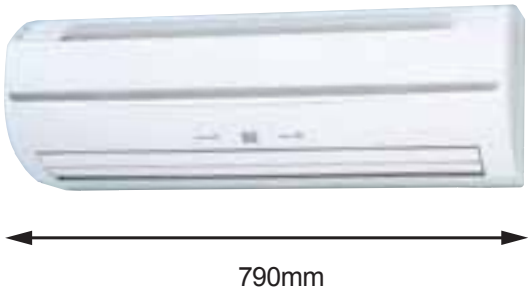
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].
*1 : This value is under cooling operation.

Compact size

Powerful output even compact design

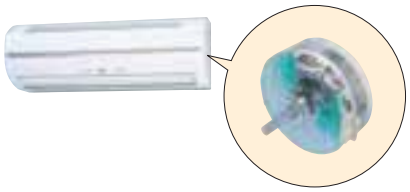
Though the indoor unit is compact, it features a large, high pressure cross fan (90mm diameter) in a centre mounted configuration and a Lambda type heat exchanger to provide plenty of power.

Width
790mm



New style high power DC fan motor

- High power
- Wide rotation range
- High efficiency
- Compact size

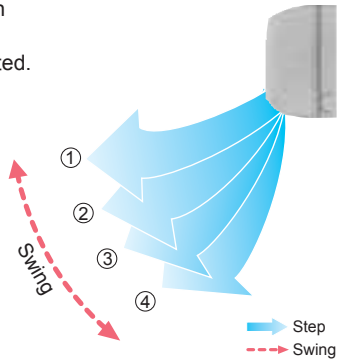


Symmetrical design

Symmetrical, clean design that suits all interiors.

Auto swing louvre

The Auto Swing Louvre function ensures that the air direction corresponds to the mode selected.

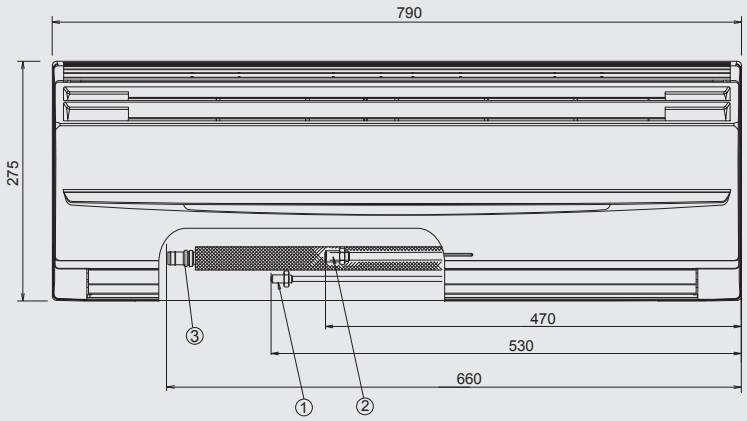


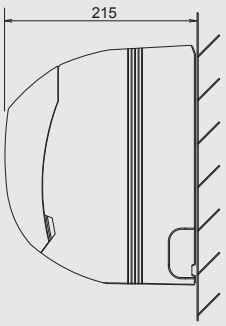
Easy maintenance

Easy maintenance has been realized as the front panel can removed for easy access.

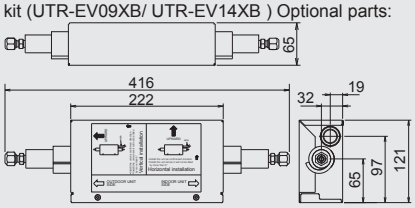
Dimensions (Unit : mm)

Models: ASYA07 / ASYA09 / ASYA12 / ASYA14
ASYE07 / ASYE09 / ASYE12 / ASYE14





EV kit (UTR-EV09XB/ UTR-EV14XB) Optional parts:



① Refrigerant pipe flare connection (Liquid)
② Refrigerant pipe flare connection (Gas)
③ Drain piping connection

Wall Mounted

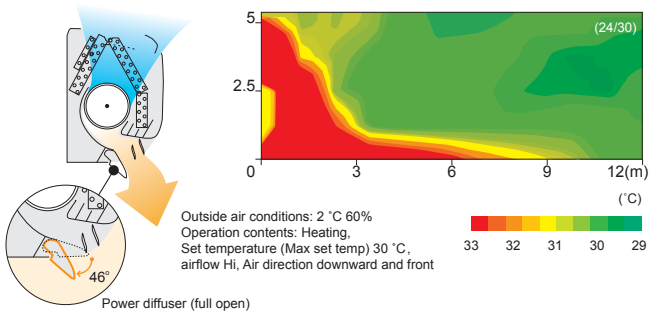
Models

ASYA18GACH
ASYA24GACH
ASYA30GACH

Simple & Elegant Appearance Design

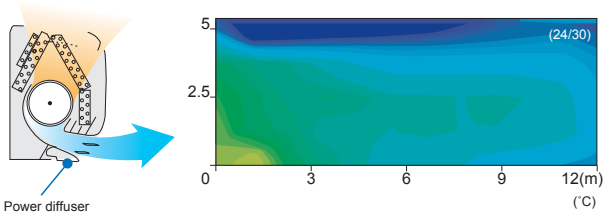
More comfort airflow by adopting power diffuser

"Vertical airflow"
provides powerful floor level heating



Outside air conditions: 2 °C 60%
Operation contents: Heating,
Set temperature (Max set temp) 30 °C,
airflow Hi, Air direction downward and front

"Horizontal airflow" does not blow cool air directly at the occupants in the room



Outside air conditions: 35 °C 40%
Operation contents: Cooling,
Set temperature (Min set temp) 18 °C,
airflow Hi, Air direction downward and front

Specifications

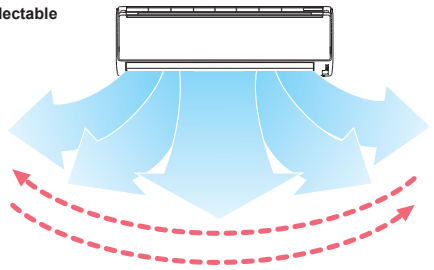
Model name			ASYA18GACH	ASYA24GACH	ASYA30GACH
Power source			230V ~, 50Hz		
Capacity	Cooling	kW	5.6	7.1	8.0
	Heating		6.3	8.0	9.0
Input power		W	32	60	91
Airflow rate	High	m^3/h (l/s)	840 (233)	1,100 (305)	1,240 (343)
	Med		770 (213)	910 (252)	980 (271)
	Low		690 (191)	730 (202)	770 (213)
Sound pressure level	High	dB(A)	41	48	52
	Med		39	43	45
	Low		35	35	35
Dimensions (H x W x D)		mm	320 x 998 x 228		
Weight		kg	15		
Connection pipe diameter	Liquid (Flare)	mm	ø9.52		
	Gas (Flare)		ø15.88		
	Drain		ø12 (I.D.) ; ø16 (O.D.)		

Note : Specifications are based on the following conditions.
Cooling : Indoor temperature of 27˚CDB / 19˚CWB, and outdoor temperature of 35˚CDB / 24˚CWB.
Heating : Indoor temperature of 20˚CDB / (15˚CWB), and outdoor temperature of 7˚CDB / 6˚CWB.
Pipe length : 7.5 m; Height difference between outdoor unit and indoor unit : 0 m.
Voltage : 230 [V].

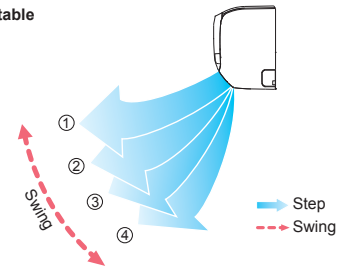
Double auto swing

A combination of up/down and right/left directional swing allows three-dimensional air direction control.

5 steps selectable

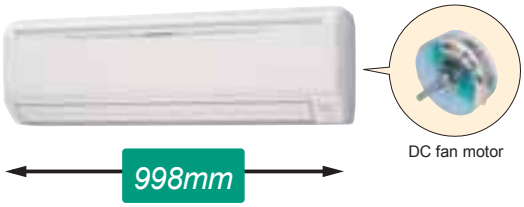


4 steps selectable

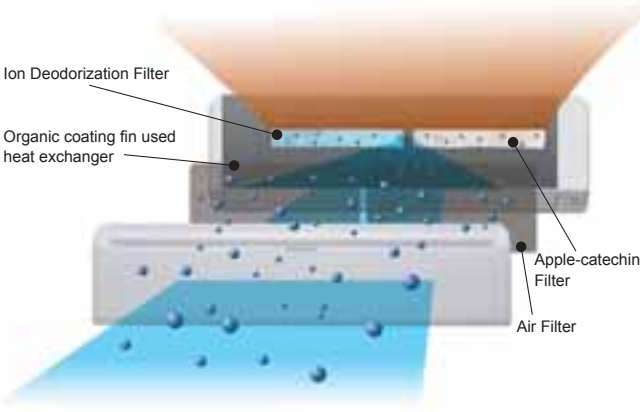


Compact & Slim design

By using DC fan motor, compact design is realized.



Air conditioner filter features



High quality air conditioning by incorporation of high performance filter.

Ion Deodorization Filter

The filter deodorizes by powerfully decomposing absorbed odors using the oxidizing and reducing effects of ions generated by the ultra-fine-particle ceramic.

Apple-catechin Filter

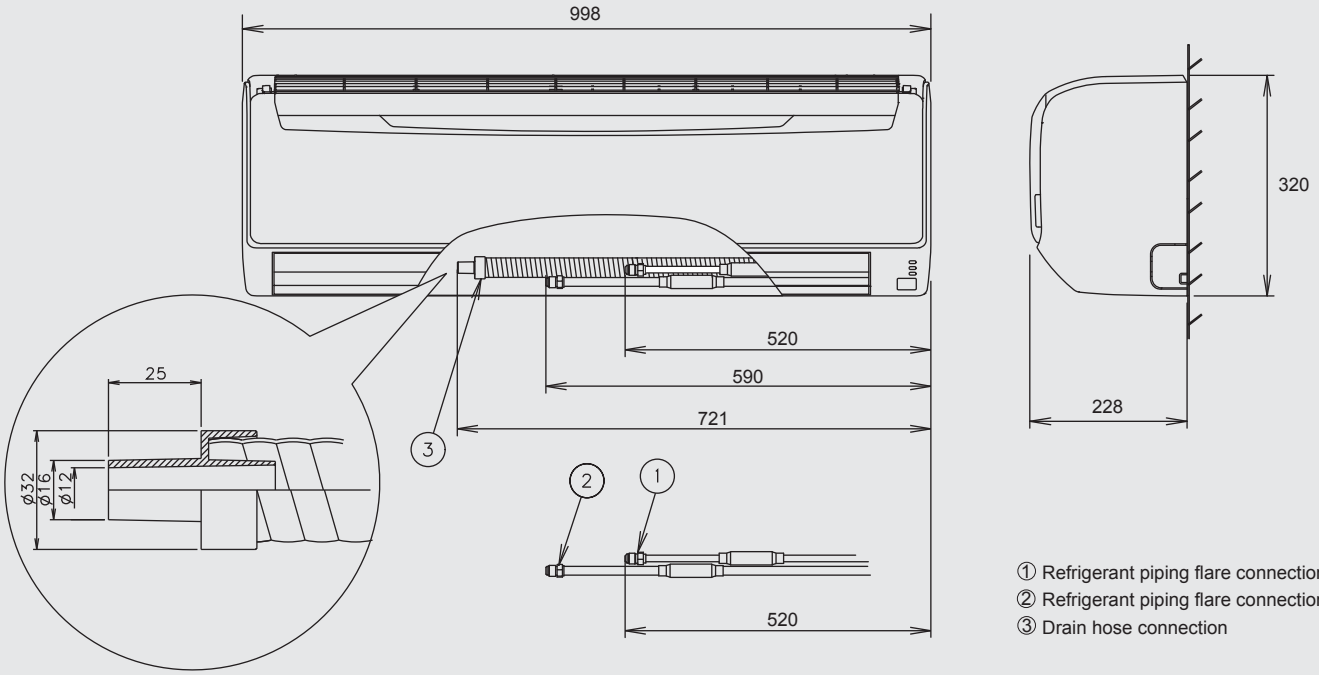
Apple-catechin filter uses static electricity to clean fine particles and dust in the air.

Easy maintenance

Simplification of drain pan cleaning improves maintenance-ability.

Dimensions (Unit : mm)

Models: ASYA18 / ASYA24 / ASYA30



① Refrigerant piping flare connection (Liquid)
② Refrigerant piping flare connection (Gas)
③ Drain hose connection

CONTROL SYSTEMS

User friendly control system
provides individual control to centralized control

The AIRSTAGE control system can perform air conditioning control of individual room, centralized control by floor or by building, or centralized energy saving air conditioning control for large buildings.
A variety of air conditioning management schemes are available to match the application, such as linking with the building control system, linking with a single split models, and using various interfaces.

SYSTEM OVERVIEW

INDIVIDUAL CONTROLLER

CENTRALIZED CONTROLLER

CONVERTOR / ADAPTOR

SERVICE & MAINTENANCE TOOL

AIRSTAGE™

CONTROL SYSTEM OVERVIEW

Air Conditioning Individual Control

Wired Remote Controller (Touch panel)
UTY-RNRY

Wired Remote Controller
UTY-RNKYT

Simple Remote Controller
UTY-RSKYT

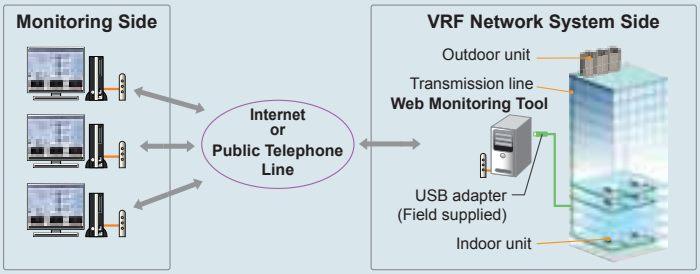
Simple Remote Controller
UTY-RHKYT
Without operation mode

Wireless Remote Controller
UTY-LNHY

For
All AIRSTAGE™
series

Service & Maintenance Tool

Web Monitoring System Software
UTY-AMGX



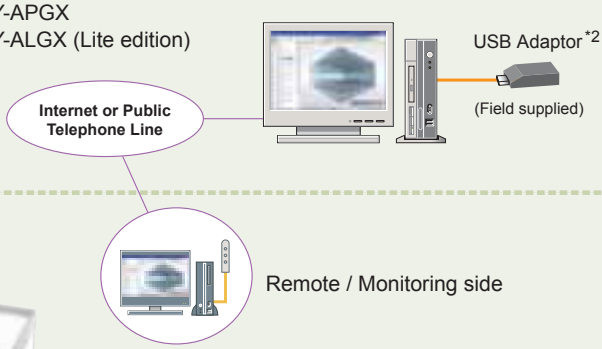
USB Adaptor *2
(Field supplied)

Service Tool Software
UTY-ASGX

Air Conditioning Centralized Control

System Controller
Software

UTY-APGX
UTY-ALGX (Lite edition)



Touch Panel Controller
UTY-DTGY

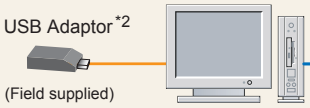
Central Remote Controller
UTY-DCGY

Group Remote Controller
UTY-CGGY

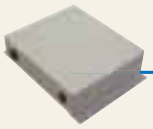
Convertor / Adaptor (for external device)

BACnet® Gateway
Software

UTY-ABGX



Network Convertor (BMS / LONWORKS®)
UTY-VLGX



External Switch Controller
UTY-TEKX

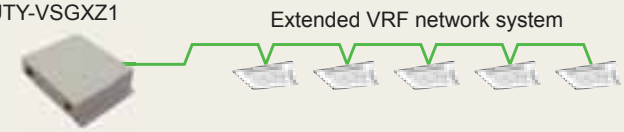
BMS/BAS *1

*1. BMS/BAS: Building Management System / Building Automation System
*2. USB Adaptor is U10 USB Network Interface of Echelon® Corporation.

Convertor / Adaptor (for system expansion)

Network Convertor
UTY-VGGXZ1

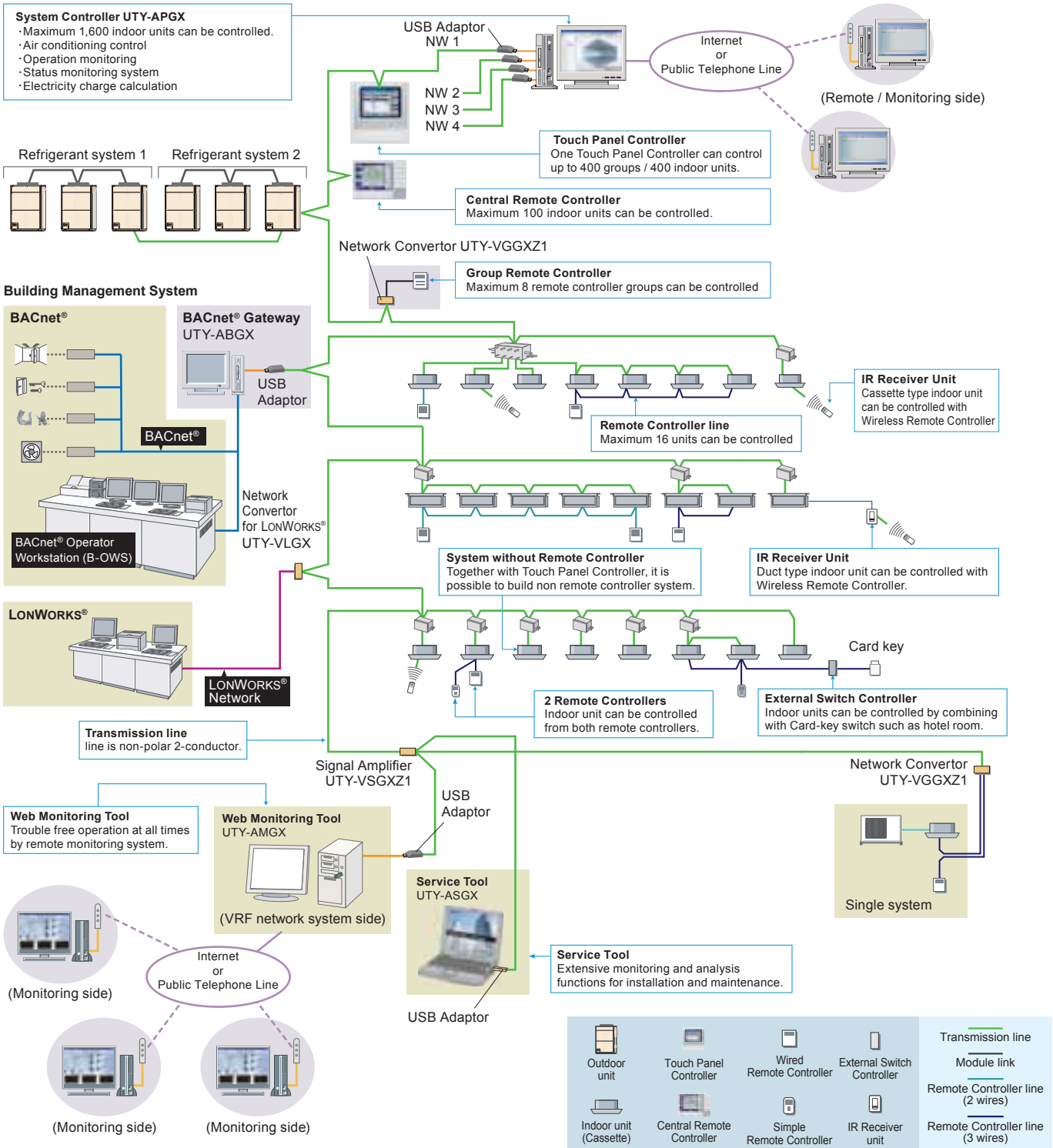
Signal Amplifier
UTY-VSGXZ1



Wiring system

Max. transmission line length
3,600m

- Wiring construction of the control system is made of power source wiring, transmission wiring and remote controller wiring.
- Total wiring length (total length of transmission line) can be extended up to 3,600m (by using signal amplifiers).



Comparison table of Controllers

Item			Wired Remote Controller (Touch panel)	Wired Remote Controller	Simple Remote Controller	Simple Remote Controller *1	Wireless Remote Controller	Group Remote Controller	Central Remote Controller	Touch Panel Controller	System Controller Lite Software	System Controller Software
Model name			UTY-RNRY	UTY-RNKYT	UTY-RSKYT	UTY-RHKYT	UTY-LNHY	UTY-CGGY	UTY-DCGY	UTY-DTGY	UTY-ALGX	UTY-APGX
Max. controllable remote controller groups			1	1	1	1	1	8	100	400	400	1600
Max. controllable indoor units			16	16	16	16	16	128	100	400	400	1600
Max. controllable groups			—	—	—	—	—	—	16	400	400	1600
Air conditioning control function	On / Off		●	●	●	●	●	●	●	●	●	●
	Operation mode setting		●	●	●	—	●	●	●	●	●	●
	Fan speed setting		●	●	●	●	●	●	●	●	●	●
	Room temp. setting		●	●	●	●	●	●	●	●	●	●
	Room temp. set point limitation		●	—	—	—	—	—	●	●	●	●
	Test operation		●	●	●	—	●	—	●	●	—	—
	Up/down air direction flap setting		●	●	—	—	●	—	●	●	●	●
	Right/left air direction flap setting		●	●	—	—	●	—	●	●	●	●
	Group setting		—	—	—	—	—	—	●	●	●	●
	RC prohibition		—	—	—	—	—	—	●	●	●	●
	Anti freeze setting		●	—	—	—	—	—	●	●	●	●
	Economy mode setting		●	●	—	—	●	—	●	●	●	●
Display	Error		●	●	●	●	—	●	●	●	●	●
	Defrosting		●	●	●	●	—	—	●	●	●	●
	Current time		●	●	—	—	●	●	●	●	●	●
	Day of week		●	●	—	—	—	●	—	●	●	●
	R.C. prohibition		●	●	●	●	—	●	●	●	●	●
	Cooling/heating priority		●	●	●	●	—	●	●	●	●	●
	Address display		●	●	●	●	—	●	●	●	●	●
	Room temp		●	—	—	—	—	—	—	—	—	—
	Multi language		●	—	—	—	—	—	●	●	●	●
	Summer time		●	—	—	—	—	—	●	●	●	●
	Name registration		●	—	—	—	—	—	●	●	●	●
	Backlight		●	—	●	●	—	—	●	●	—	—
	2D floor layout / 3D building display		—	—	—	—	—	—	—	—	—	●
Timer	Schedule timer	Period	Week	Week	—	—	—	Week	Week	Year	Year	Year
		On/off, Temp, Mode, Times per day	8	4	—	—	—	4	20	20	144	144
	On/off timer		●	●	—	—	●	—	—	—	—	—
	Sleep timer		—	—	—	—	●	—	—	—	—	—
	Program timer		—	—	—	—	●	—	—	—	—	—
	Auto off timer		●	—	—	—	—	—	—	—	—	—
	Day off		●	●	—	—	—	—	●	●	●	●
	Min. unit of timer setting (Minutes)		10 • 30	30	30	30	5	10	10	10	10	10
Control	Status monitoring system		—	—	—	—	—	—	●	●	●	●
	Electricity charge apportionment		—	—	—	—	—	—	—	—	○	●
	Error history		●	●	●	●	—	●	●	●	●	●
	Emergency stop		—	—	—	—	—	—	●*2	●*2	—	—
	Remote management		—	—	—	—	—	—	—	—	○	●
	Energy saving management		—	—	—	—	—	—	—	—	○	○
	E-mail notification for malfunction		—	—	—	—	—	—	—	—	●	●
	Key lock		● Child lock	—	—	—	—	● Child lock	● Password setting	● Password setting	● Password setting	● Password setting

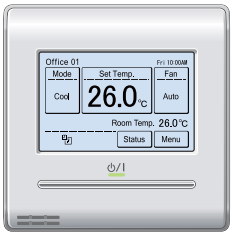
*1 "Operation mode" setting is not available for this model.
*2 This function is available only through external input control.

● : Supported ○ : Optional function
— : Not supported yet

Wired Remote Controller (Touch Panel)

Max. controllable 16 indoor units

UTY-RNRY



Easy operation by high-definition large STN-LCD touch panel screen

- Easy finger touch operation with LCD panel
- Built-in weekly/Daily timer(ON/OFF,Temp.,Mode)
- Backlight enables easy operation in a darkened room
- Room temperature display
- Control up to 16 indoor units

Functions

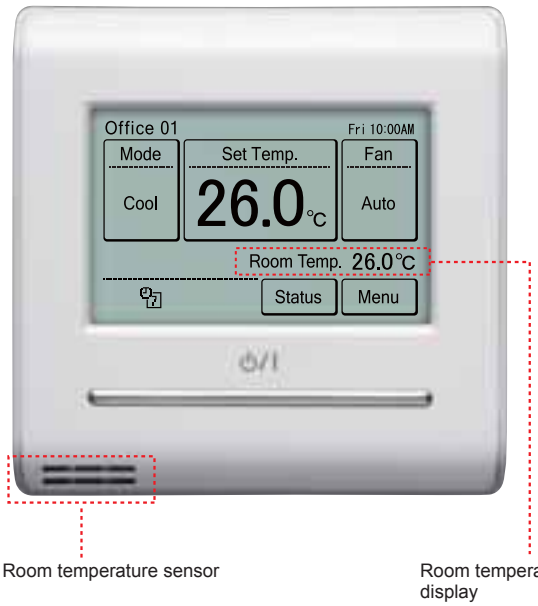
High performance and compact size

- In addition to the individual control, various energy saving controls can be realized using one remote controller only.

Individual control + Thermo sensor + Weekly timer + Auto off timer →

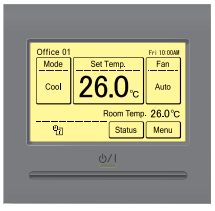
Accurate and comfortable control

- Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.



Backlight

- Backlight enable easy operation in a darkened room.
- For the lighting time of Backlight, 30 or 60 seconds can be set.
- Backlight activates while the buttons are operated and goes off 30 or 60 seconds after the operation stops.

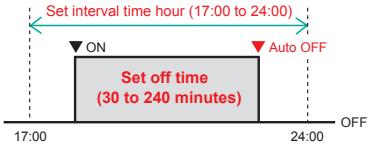


Various energy saving control

Auto OFF Timer

- The indoor unit automatically turns off after a set time has passed.
- The time interval for which auto off works can be set.

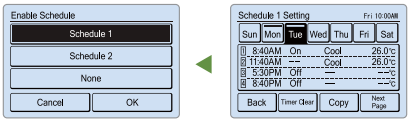
Ex) At interval time hour (17:00 to 24:00) to prevent forgetting to turn off

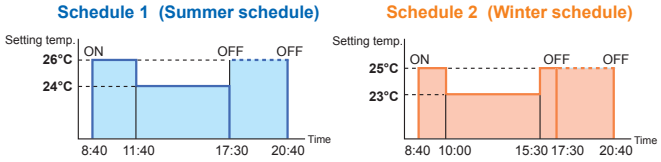


2 schedules Weekly Timer

- 2 schedules such as for the summer and winter can be set.
- 8 setting changeable per day of week (Setting items: On/Off, Temperature, Mode, Time)

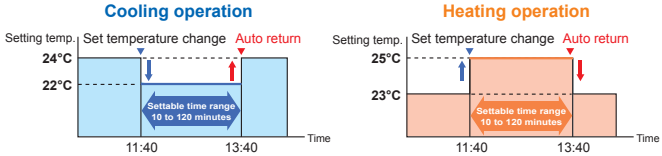
Ex)





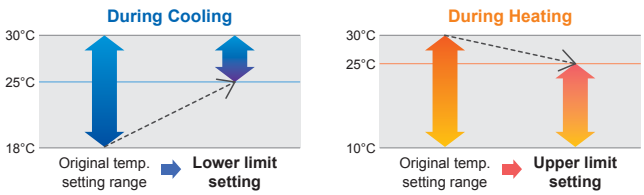
Set Temperature Auto Return

- The setting temperature automatically returns to the previous setting temperature.
- The time range in which the set temperature can be changed is 10 to 120 minutes.



Set Temperature Upper and Lower Limit Setting

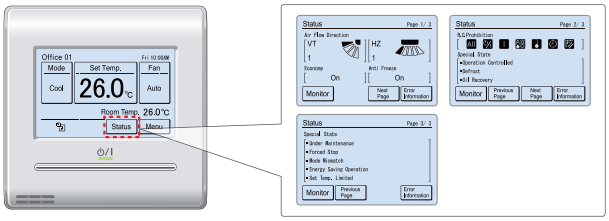
- The set temperature range can be set for each operation mode. (Cooling / Heating / Auto)



Various convenient functions

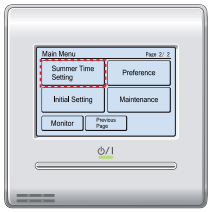
Displays setting status and Limitations

• The remote controller settings can be easily checked



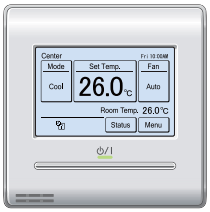
Child lock

• Lock / unlock method: Push the ON/OFF button and the screen (4 seconds)



Summer Time display

• This function can be set easily from Menu screen



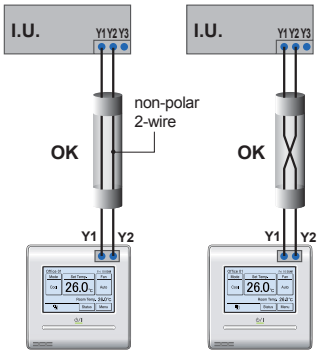
Name Registration

• Indoor unit names can be registered in the remote controller screen. This makes it easy to identify the indoor unit you want to control in the room.

Simplified installation

Uses non-polar 2-wire type

• The faulty wiring can be prevented by using non-polar 2-wire.

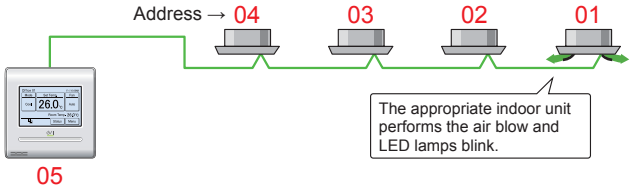


Auto Address Setting/Setting Position Notification

• Reduce errors and install time compared with the current specification Rotary SW

• When will be set remote controller groups, can also be set automatically new Wired remote controller address

• After auto address setting of new wired remote controller groups, what number can also confirm addresses



Easy Maintenance

Error History Display

• The errors that occur in the indoor unit or remote controller are saved as a history.

• A maximum of 32 error incidents can be saved.

Specifications

Model name	UTY-RNRY
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 20.4
Weight (g)	220

DC12V is supplied by the indoor unit.

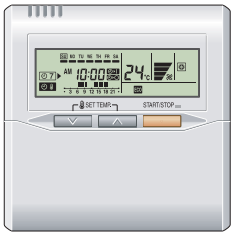
Wired Remote Controller

Max. controllable 16 indoor units

UTY-RNKYT

The room temperature can be controlled by detecting the temperature accurately from the built-in sensor

- Simple operation with Built-in Weekly / Daily Timer.
- Control up to 16 indoor units.
- Up to 2 wired remote controllers can be connected to a single indoor unit.



Functions

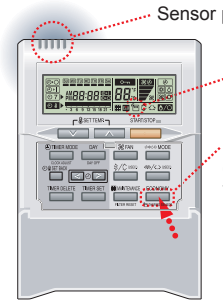
Powerful features and compact size

This Wired Remote Controller incorporates four primary functions into a single unit.

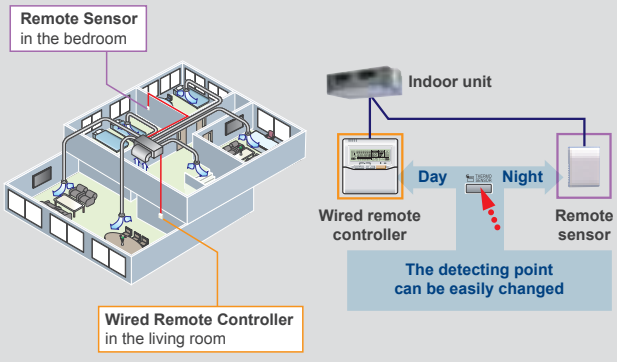
Individual control + Thermo sensor + Weekly timer + Setback timer

Accurate and comfortable

Indoor temperature can be detected accurately by the inclusion of a thermo sensor in the body of the wired controller.
This new wired remote controller and the optional remote sensor allows flexibility in sensor location, suitable for all requirements.



Example of changing sensor



Displayed temperature is set temperature.

Built-in timers

Easy-to-understand time bar display

Weekly timer : Possible to set ON/OFF time to operate twice each day of the week.

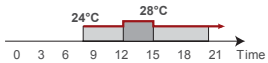
Setup screen example
Set to Wednesday: 8:00 to 20:00.

Screen after setup

Setback timer : Possible to set temperature for two times spans and for each day of the week.

Setup screen example
Set from Sunday to Saturday:
12:00 to 15:00, 28°C.

At "Weekly timer" + "Set back timer" setup



24°C → 28°C → 24°C

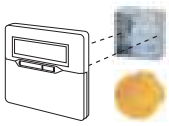
Diagnosis check function

Two methods are available for determining the cause of failure in the event of a malfunction occurs:

- **Malfunction diagnosis function**
- **Error history (Last 16 error codes can be accessed)**

Simple installation

Components are compatible with standard switch boxes.
Flat back surface allows to be installed wherever it is needed.



European mounting box

JIS built-in box

Specifications

Model name	UTY-RNKYT
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 18
Weight (g)	160

DC12V is supplied by the indoor unit.

Simple Remote Controller

Max. controllable
16
indoor units

UTY-RSKYT / UTY-RHKYT (Without Operation mode)

Compact remote controller provides access to basic functions

- Up to 16 indoor units can be controlled with one remote controller.
- Suitable for hotels or offices as it is easily operated with no complex functions.

UTY-RSKYT

UTY-RHKYT
Without Operation mode

Functions

User-friendly operation

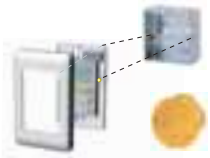
- Provides access to basic operations, such as Start / Stop, Fan control, Operation mode switching, and Room temperature setting.
- A large On / Off button is provided in the centre of the remote controller for easy operation.
- Can be used jointly with other individual control unit.
- Following an error display, diagnostics can be carried out on the controller.

Backlight

- Backlight enables easy operation in a darkened room.
- Backlight activates during all button operations, and lasts 10 seconds in Operation mode and 5 seconds in stop mode after a button is pressed.

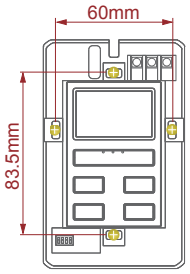
Simple installation

Can be mounted on the European Mounting Box (Installation dimension: 60mm) or the JIS Built-in Box (Installation dimension: 83.5mm).



European switch box

JIS built-in box



Functions summary

Model / Operation	UTY-RSKYT	UTY-RHKYT
On / Off	●	●
Fan control	●	●
Operation mode	●	— *1
Room temp. setting	●	●

*1: "Operation mode" setting is not available.
It is recommend to use together with other type controller.

Specifications

Model name	UTY-RSKYT	UTY-RHKYT
Power Supply	DC 12V	
Dimensions (H x W x D) (mm)	120 x 75 x 14	
Weight (g)	90	

DC12V is supplied by the indoor unit.

Wireless Remote Controller

Max. controllable 16 indoor units

Selectable 4 daily timers

UTY-LNHY

Simple and sophisticated operations
with a choice of 4 daily timers

• A single controller controls up to 16 indoor units.

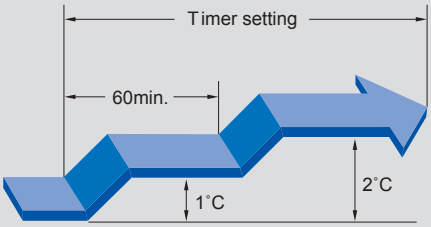
Functions

Built-in daily timer

Select from 4 different timer programs :
On / Off / Program / Sleep
Program timer : The program timer operates the ON and OFF timer once within a 24 hour period.
Sleep timer : The sleep timer function automatically corrects the set temperature according to the time setting to prevent excessive cooling or heating during sleep hours.

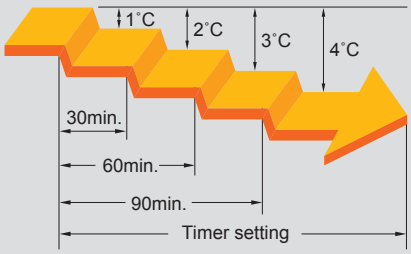
Cooling operation/dry operation

When the sleep timer is set, the set temperature automatically rises 1˚C every hour. The set temperature can rise up to a maximum of 2˚C.



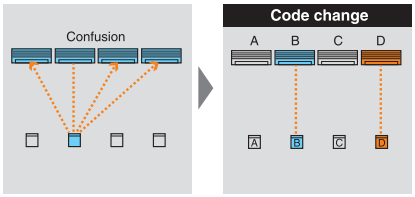
Heating operation

When the sleep timer is set, the set temperature automatically drops 1˚C every 30 minutes. The set temperature can drop to a max. of 4˚C.



Easy installation and operation

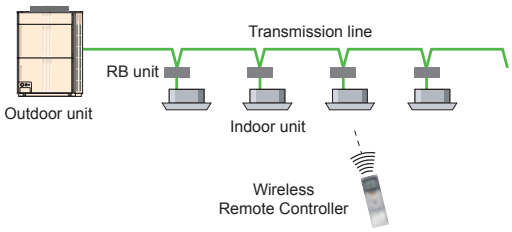
Code selector switch prevents indoor unit mix-up. (Up to 4 codes can be set.)



Wide and precise

Address setting

During installation work, address setting can be performed using the Wireless Remote Controller, thus eliminating manual switch setting.



Specifications

Model name	UTY-LNHY
Power supply	1.5V (R03 / LR03 / AAA) x 2
Dimensions (H x W x D) (mm)	170 x 56 x 19
Weight (g)	85

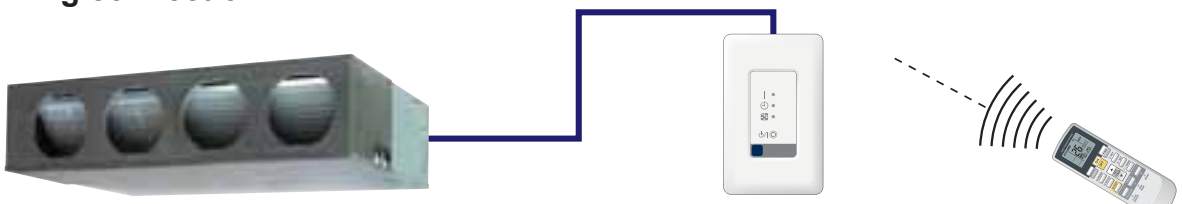
IR Receiver Unit

UTB-TWC

Necessary to control for all duct type by
Wireless Remote Controller

- Up to 16 indoor units can be controlled with one remote controller.
- Suitable for hotels or offices as it is easily operated with no complex functions.

Wiring connection



Duct Type Indoor Unit

IR Receiver Unit

Wireless
Remote Controller

Specifications

Model name	UTB-TWC
Power supply	DC 5V
Dimensions (H x W x D) (mm)	145 x 90 x 30
Weight (g)	150

IR Receiver Unit

UTY-LRHYB1

Cassette type indoor unit can be controlled
with Wireless Remote Controller

Wireless
Remote Controller

Specifications

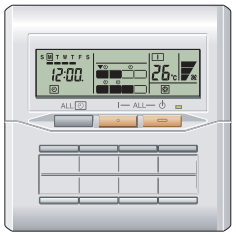
Model name	UTY-LRHYB1
Power Supply	DC 5V
Dimensions (H x W x D) (mm)	193.9×193.9×31.2
Weight (g)	140

Group Remote Controller

Max. controllable **8** remote controller groups

Max. controllable **64** group R.C. in a VRF network system

UTY-CGGY



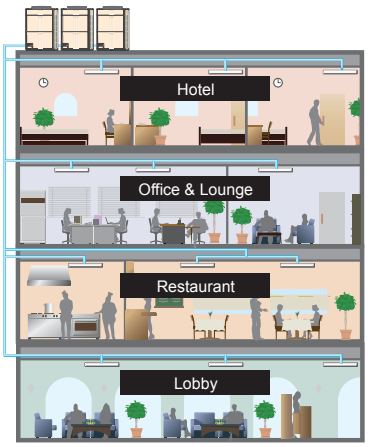
Group control of indoor units with simple operation

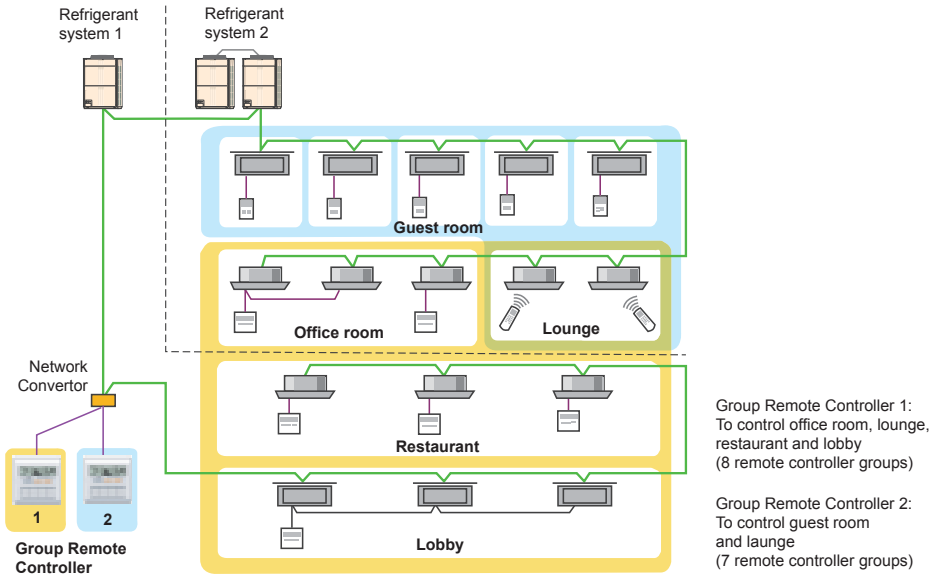
- Up to 8 remote controller groups can be controlled by one Group Remote Controller.
- Up to 64 Group Remote Controllers can be connected in one VRF network system.
- Network Convertor (UTY-VGGXZ1) is required to connect Group Remote Controllers to a VRF network system.
  (Network Convertor allows up to 4 Group Remote Controllers)

Note: Max controllable refrigerant system "two"

Control up to 8 remote controller groups

Single Group Remote Controller controls and monitors up to 8 remote controller groups.





High performance and compact size

ON / OFF, Operating mode, Room temperature and Fan speed setting can be controlled / monitored centrally or individually.

Central control + **ON/OFF control** + **Weekly timer** →

Built-in weekly timers

The weekly timer is provided as a standard function.

1. The timer can be set up for up to 4 times per day.
   (On / Off, operating mode, set temperature)
2. Allows separate settings for each day of the week.

Specifications

Model name	UTY-CGGY
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 120 x 18
Weight (g)	200

DC12V is supplied by a network converter.

Central Remote Controller

Max. controllable **100** Indoor units

Max. controllable **16** groups

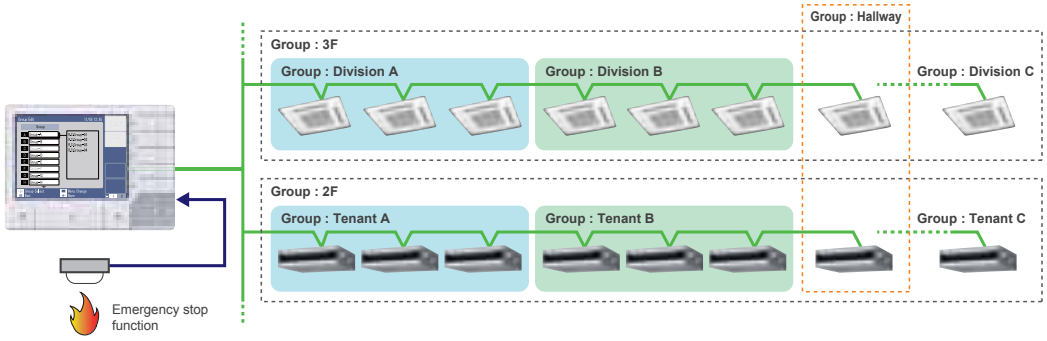
UTY-DCGY

Central control of small- and medium-sized buildings and tenants. The operation status of all connected indoor units can be viewed at a glance on a large LCD monitor to simplify individual control to batched control.

- Individual control and monitor of 100 indoor units
- 5 inch TFT color screen
- User friendly view and easy operation
- External input / output contact
- Detachable power supply unit
- Corresponds to 7 different languages (English, Chinese, French, German, Spanish, Russian, Polish)

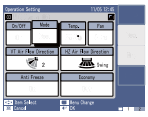
System overview

- It allows multiple indoor units grouping (Max.16 groups controlled)
- Interlock with external device

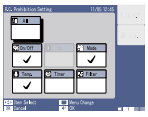


Functions

- Diverse control of indoor units



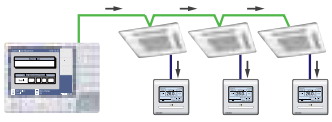
- Remote controller prohibition (All, On / Off, Mode, Temp, Timer, Filter)



- Weekly timer

- Error history

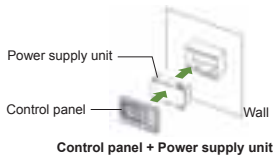
- Automatic clock adjustment



Easy Installation

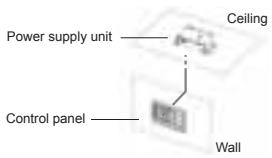
- The control panel and power supply unit can be installed separately.
- For flexibility in installation, the Control panel can be built into the wall or fix on the wall.

Setting pattern 1

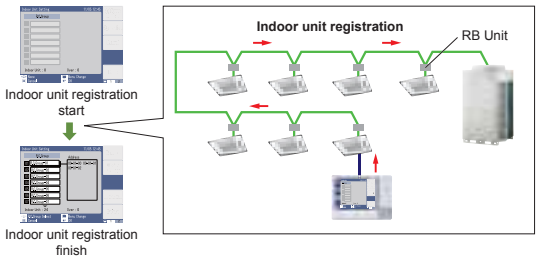


Control panel + Power supply unit

Setting pattern 2



- Automatic or manual indoor unit registration



Specifications

Model name	UTY-DCGY	
	Control Panel	Power Supply Unit
Power Supply	DC 5 V	100-240V, 50-60Hz, Single phase
Dimensions (H x W x D) (mm)	120 x 162 x 25.7	99 x 135 x 39.2
Weight (g)	308	355

<PACKING LIST>

Packing List	Control Panel / Power Supply Unit / Connecting cable, etc.

Touch Panel Controller

Max. controllable
400
Indoor units

UTY-DTGY

High visibility and easy operation via high resolution 7.5 inch TFT-LCD touch panel screen

- Large-sized 7.5-inch TFT color
- LCD Easy finger touch operation
- Stylish shape and design to suit all application
- No additional component is required for installation
- Up to 400 indoor units can be controlled
- Selectable 2 display types (Icon / List) in monitoring mode

Functions

Easy operation

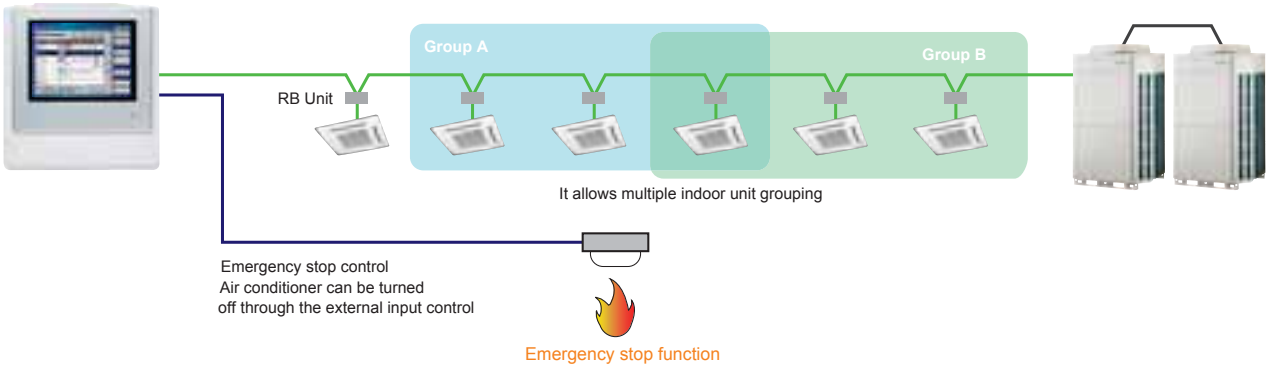
- Large and wide-angled LCD is easily viewable even at a distance
- Easy-to-understand icon-driven Graphical User Interface (GUI)
- Wide range of simple-to-understand icons

- Operation can be selected using your finger or the dedicated touch pen by pressing the appropriate on-screen icon
- Up-to-date status display
- Background color identifies current control operation Blue for monitoring, green for operational control

Easy maintenance

- Flat touch screen is easily cleaned
- Non-glare coating on touch panel controller minimizes fingerprint marking
- Easy-to-remove front cover

Up to 400 indoor units can be controlled



Function

- Up to 400 indoor units can be controlled
- It allows multiple indoor units grouping
- Schedule timer function is standard (20 patterns per day)
- Emergency stop function(through the external input control)
- Temperature upper and lower limit setting
- The clock of each indoor unit correct setting

Individual control

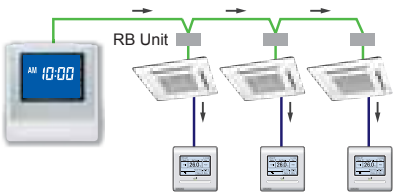
Flexible grouping

Schedule control

Indoor units operation monitoring

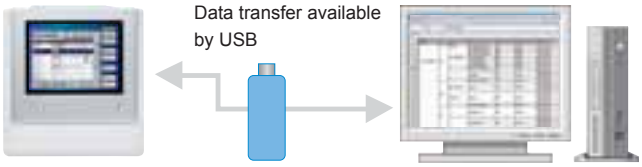
Automatic clock adjustment

The time setting of each controller can be set in batch automatically.



Versatility

CSV format data edited by PC can be imported to Touch Panel Controller.



Easy installation

Touch Panel Controller is easily mounted to the wall Flat back surface allows to be installed wherever it is needed.

- Correctable mechanism for tilting (horizontal) after the installation of the body

No additional component is required for installation

- There is no need for the installation space of power supply adaptor and transmission adaptor etc.

Specifications

Model name	UTY-DTGY
Power Supply	100-240V 50/60Hz, Single phase
Dimensions (H x W x D) (mm)	260 x 246 x 54
Weight (g)	2,150
Interface	USB 2.0

System Controller Software

UTY-APGX

System Controller realizes the advanced integrated monitoring & control of VRF network system from small scale buildings to large scale buildings.

- Up to a maximum of 4 VRF network systems, 1600 indoor units, and 400 outdoor units can be controlled.
- In addition to air conditioning precision control function, central remote control, electricity charge calculation, schedule management, and energy saving functions are strengthened and building manager and owner needs are met.

Max. controllable **4** VRF network systems

Max. controllable **400** Outdoor units

Max. controllable **1,600** Indoor units

System Controller Lite Software

UTY-ALGX

System Controller Lite has standard functions sufficient for air conditioner management in small and medium scale buildings .

- Up to a maximum of 1 VRF network system, 400 indoor units, and 100 outdoor units can be controlled.
- In addition to air conditioning precision control function, a variety of management software is available as an option to give customers a wide range of choice.

Max. controllable **1** VRF network systems

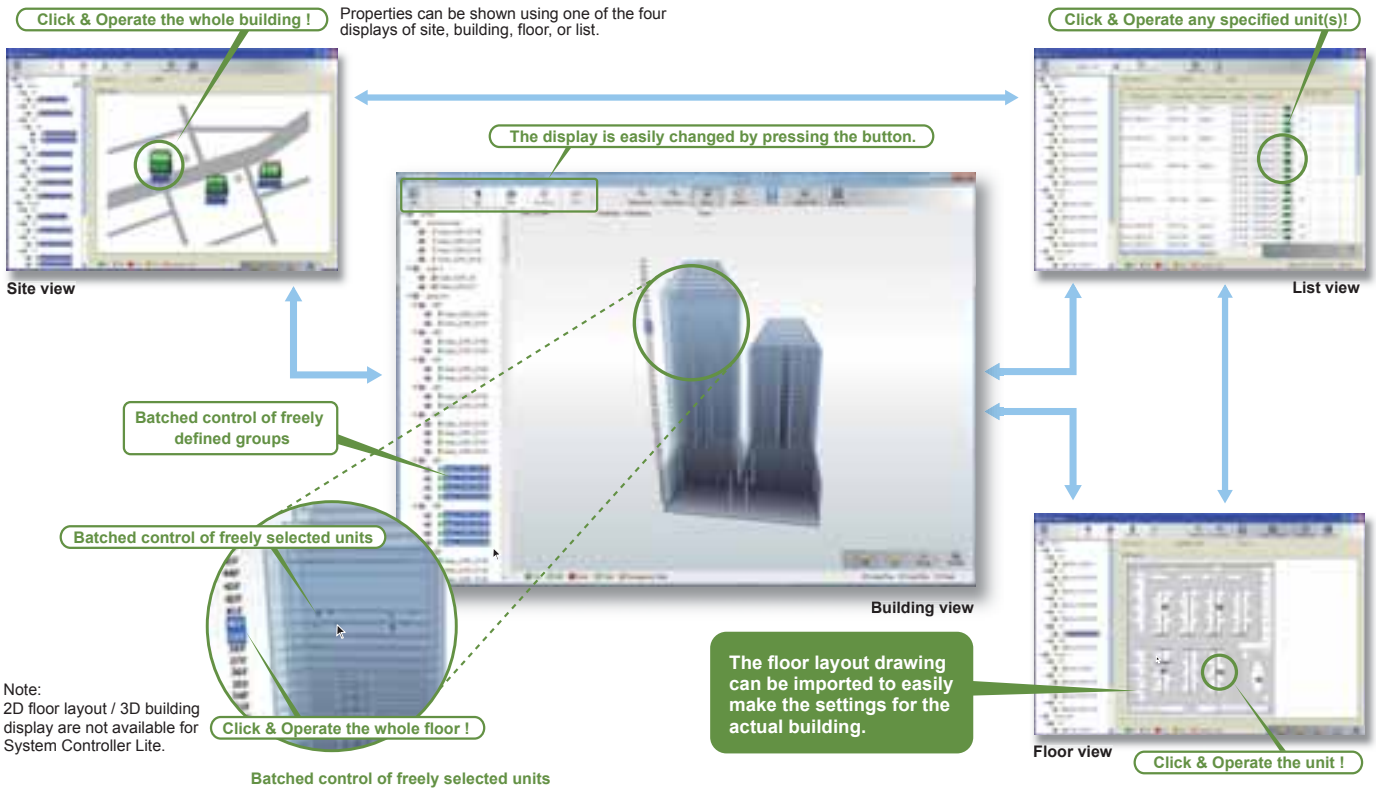
Max. controllable **100** Outdoor units

Max. controllable **400** Indoor units

Functions

User friendly view and operation

- **Click & Operate :** The property is shown visually from the perspective most suitable for operation and operated accordingly (Click & Operate). You can select from among the 4 displays of site, building, floor, or list.
- **Freely define groups for batched control :** Indoor units can be freely grouped for simple batched control from a tree menu. Grouping by hierarchal structure, such as by section, division or department is possible.



Note:
2D floor layout / 3D building display are not available for System Controller Lite.

Diverse operation management & Data management

Standard for System Controller and System Controller Lite

Schedule management

- Annual schedules can be set for each remote controller group / user defined group.
- Start / stop, operating mode, remote controller prohibition, and temperature settings can be set up to 143 times per day at 10 minute intervals for up to 101 configurations for each remote controller group.
- Settings can be made for periods straddling midnight.
- Allows programming of special settings for holidays, including public holidays, for a complete year.
- Low noise operation of outdoor unit can be scheduled.

Diverse control of indoor and outdoor unit

- Indoor unit operation state, operation mode, etc. are displayed
- Indoor unit start / stop and operation mode switching
- Room temperature set point limitation
- Outdoor unit low noise setting

Remote controller prohibition

This prohibits changes to the operation mode, temperature, start/stop, etc.

Error display & E-mail notification

Error is notified with popup message, audible sound and E-mail real time when error occurs. Error for the past 1 year are logged and can be reviewed later.

Operating & control record

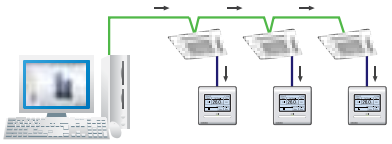
Displays the history of operation status and control.

Data base import/export

Imports/exports registration data, layout data, and image data. Only the administrator can make this setting.

Automatic clock adjustment

The time setting of each controller can be set in batch automatically.



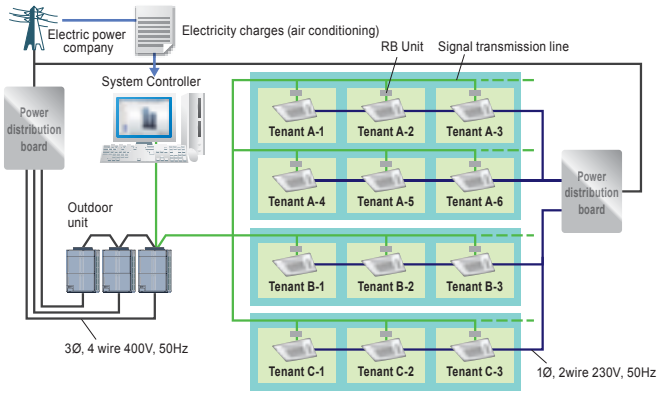
Electricity charge apportionment

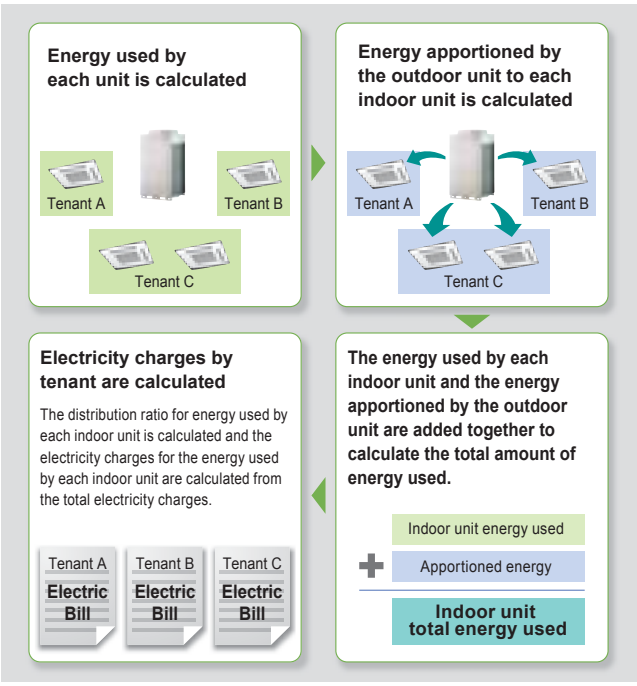
Standard for System Controller
Option for System Controller Lite UTY-PLGXA1

Electricity charge apportionment calculation framework

Suppose you want to find the power consumed by the air conditioners of each tenant from the electricity charge for each month. With electricity charge apportionment function, used energy apportionment ratio will be provided, calculating in detail the energy consumed by the units used by each tenant. This information is then used to calculate the charges for the electricity consumed for air conditioning by each tenant from the total electricity charges in the bill from the electric power company. (See figure at right)
The detailed calculation takes into consideration such things as unused rooms and nighttime electricity charges and shows them in a charges calculation sheet.

System Configuration Example





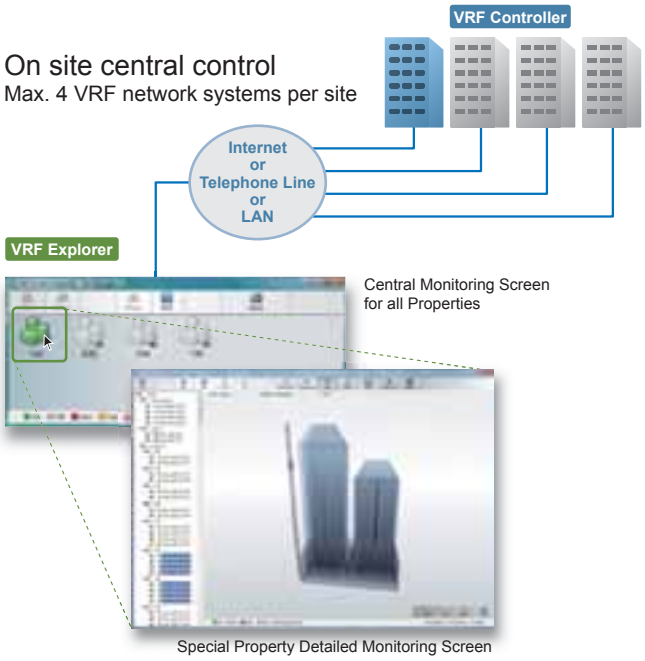
Remote management

Standard for System Controller
Option for System Controller Lite UTY-PLGXR1

System Controller may be used on site or remotely over various networks for remote central control. System Controller requires 2 softwares working together. VRF Controller runs on site and communicate with VRF system. VRF Explorer runs remotely and provides user interface and communicate with the VRF Controller. VRF Controller and VRF Explorer program may run in a single PC or in different PCs separated by network. By using VRF Explorer software, one PC can perform central control of 10 VRF system sites with max. 20 buildings per site.

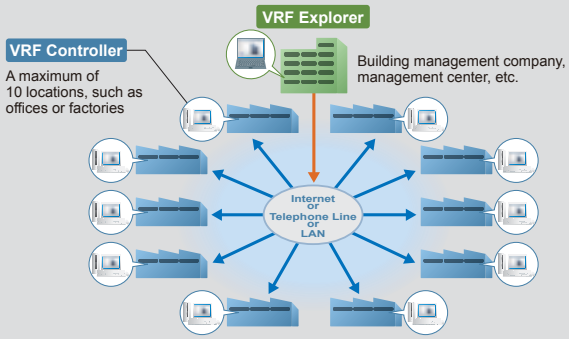
On site central control

Max. 4 VRF network systems per site

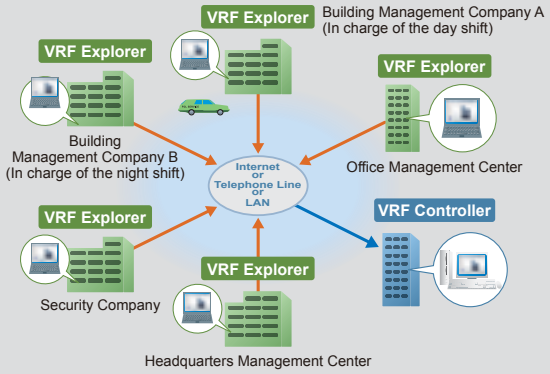


Remote central control

1 VRF Explorer can control or monitor up to 10 sites.



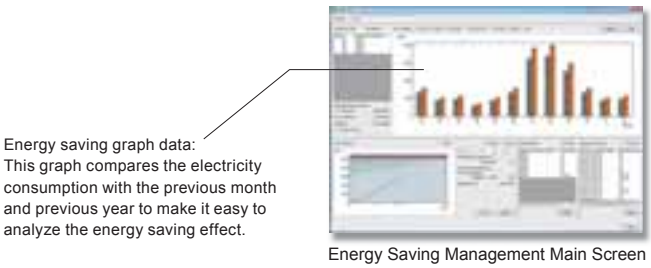
1 VRF Controller can be monitored from any number of VRF Explorers (Up to 5 connections simultaneously).



Energy saving management

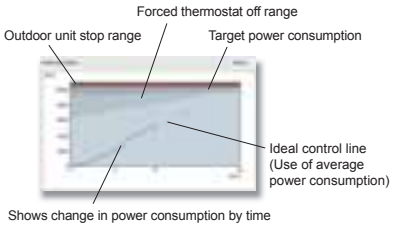
Option for System Controller UTY-PEGX
Option for System Controller Lite UTY-PLGXE1

A variety of energy saving operations can be set and managed depending on the season, weather, and time period. Excellent energy saving operation is performed while keeping users comfortable.



Peak cut operation

A power meter is connected to detect the total power consumption while shifting the indoor unit set temperature, set the indoor unit forced thermostat off, and taking other measures to carefully control the power consumed while maintaining comfort and conducting control to maintain the target power consumption set for each time. The indoor units to be controlled can be freely grouped and the control level can be set.

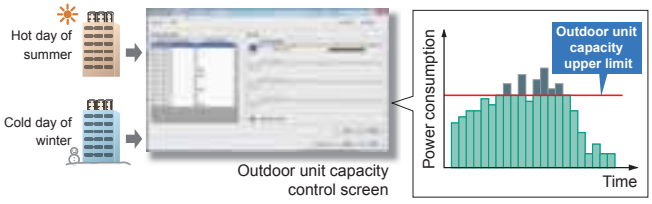


Indoor unit rotation operation

The operation of indoor units can be automatically rotated within a group in accordance with the set annual schedule to reduce power consumption while maintaining comfort. The indoor unit operation stoppage rate can be selected.

Outdoor unit capacity save

Outdoor unit capacity save switches the outdoor unit capability upper limit to suppress power consumption during hot summers and cold winters by averaging the power saving effect of each refrigerant system. You can select from 50% or more of the capacity upper limit.



FUNCTIONS SUMMARY

Function	Type		System controller		System controller lite			
			UTY-APGX	Option UTY-PEGX	UTY-ALGX	Option UTY-PLGXR1	Option UTY-PLGXA1	Option UTY-PLGXE1
System specification	Max. VRF networks supported		4	-	1	-	-	-
	Max. indoor unit / remote controller groups per VRF network		400	-	400	-	-	-
	Max. outdoor units per System controller		100	-	100	-	-	-
	Max. indoor units / remote controller groups per System controller		1600	-	400	-	-	-
	Max. outdoor units per System controller		400	-	100	-	-	-
Site supervision	Multi site display		10	-	10	-	-	-
	Number of building / 1 site		20	-	-	-	-	-
	Number of floor per 1 site		200	-	-	-	-	-
	Number of floor per 1 building		50	-	-	-	-	-
	3D graphical layout view		○	-	-	-	-	-
	2D graphical layout view		○	-	-	-	-	-
	List display		○	-	○	-	-	-
	Tree display		○	-	○	-	-	-
	Group display		○	-	○	-	-	-
Error management	Error notification		○	-	○	-	-	-
	Audible alarm		○	-	○	-	-	-
	Error e-mail notification		○	-	○	-	-	-
History	Error history		○	-	○	-	-	-
	Operation history		○	-	○	-	-	-
	Control history		○	-	○	-	-	-
Operation control	Individual control	On/Off	○	-	○	-	-	-
		Operation mode	○	-	○	-	-	-
		Room temperature	○	-	○	-	-	-
		Fan speed	○	-	○	-	-	-
		Air flow direction	○	-	○	-	-	-
		Economy mode	○	-	○	-	-	-
		Room temperature set point limitation	○	-	○	-	-	-
		Test operation	○	-	○	-	-	-
		Antifreeze	○	-	○	-	-	-
		Outdoor unit low noise setting	○	-	○	-	-	-
	Individual management	Remote control prohibition setting	○	-	○	-	-	-
		Temperature upper and lower limit setting	○	-	○	-	-	-
		Filter sign reset	○	-	○	-	-	-
	Other	Memory operation	○	-	○	-	-	-
		Pattern operation	○	-	○	-	-	-
Schedule	Annual Schedule		○	-	○	-	-	-
	Special day setting		○	-	○	-	-	-
	On /off per day		72	-	72	-	-	-
	On / off per week		504	-	504	-	-	-
	Day off		○	-	○	-	-	-
	Min. unit of timer setting (Minutes)		10	-	10	-	-	-
	Low noise mode Weekly schedule		○	-	○	-	-	-
Remote managemment	Remote monitoring		○	-	-	○	-	-
	Remote operation control		○	-	-	○	-	-
	Remote function setting		○	-	-	○	-	-
Electricity charge apportionment	Apportionment charge/bill calculation		○	-	-	-	○	-
	Tenant (block) setting		○	-	-	-	○	-
	Common facilities apportionment setting		○	-	-	-	○	-
	Rated power consumption allotment setting		○	-	-	-	○	-
	Individual calculation at cooling and heating		-	○*	-	-	○	-
	Electricity meter supported		-	○	-	-	○	-
Energy saving management	Indoor unit rotation		-	○	-	-	-	○
	Peak cut control		-	○	-	-	-	○
	Outdoor unit capacity save		-	○	-	-	-	○
	Record of energy saving operation		-	○	-	-	-	○
	Energy saving information		-	○	-	-	-	○
	Power consumption monitor		-	○	-	-	-	○
	Electricity meter supported			○				○
Others	Database import/export		○	-	○	-	-	-
	Automatic clock adjustment		○	-	○	-	-	-
	Multi language		7 languages	-	7 languages	-	-	-

○: Available. – : Not available.

*:Power calculation application software is necessary, please contact the local FGL representative.

Personal computer system requirements

	System Controller	System Controller Lite
Operating system	• Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2 • Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 (32-bit or 64-bit), Windows® 8 Pro (32-bit or 64-bit) • Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish	
CPU	Intel® Core™ i3 2 GHz or higher	
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8, and Windows® 8.1)	
HDD	40 GB or more of free space	
Display	1024 x 768 or higher resolution	
Interface	•Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) •USB ports (Maximum of 6 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 2 USB ports are required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB port depends on the applicable system configuration.	•Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) •USB ports (Maximum of 5 ports) (Required only for the Server PC that works as VRF Controller) - Maximum of 4 USB ports are required for WibuKey connection - 1 USB port is required for Echelon® U10 USB Network Interface * The maximum number of required USB port depends on the applicable system configuration.
Graphic accelerator	Microsoft® DirectX® 9.0c compatible	
Software	Adobe® Reader® 9.0 or later	
Optical drive	DVD-ROM drive	

•Personal computer that satisfies the following system requirements

•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

<Packing list>

Type	For System controller		For System controller Lite			
	System controller	Option Energy manager	System Controller Lite	Option Remote access	Option Electricity charge apportionment	Option Energy saving
Model name	UTY-APGX	UTY-PEGX	UTY-ALGX	UTY-PLGXR1	UTY-PLGXA1	UTY-PLGXE1
DVD-ROM	1	1	1	–	–	–
WibuKey*1(Software protection key)	1	1	1	1	1	1

*1:Software protection key to be inserted in a USB slot running System Controller or System Controller Lite.
System Controller or System Controller Lite may only run on a PC with Wibu Key. However, WibuKey is not required for remote VRF Explorer software.

BACnet® Gateway

UTY-ABGX

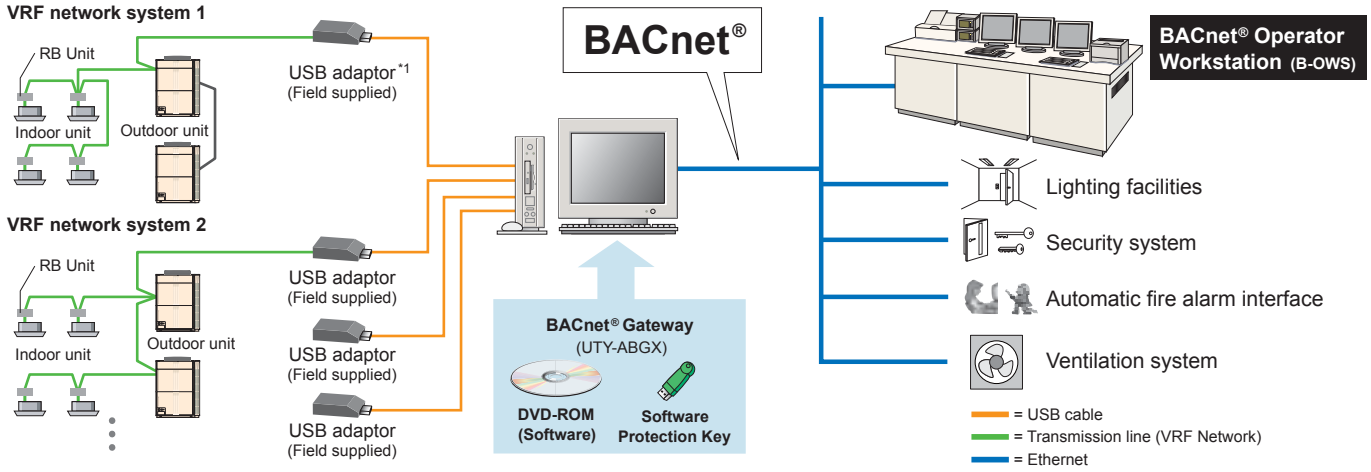
Max. controllable **4** VRF network systems

Max. controllable **400** Outdoor units

Max. controllable **1,600** Indoor units

- It is possible to connect medium to large sized BMS to VRF network system via BACnet®, a global standard for open networks.
- A maximum of 1600 indoor units with 4 VRF network systems (a maximum of 400 indoor units & 100 outdoor units for one network system) can be connected to one BACnet® Gateway.
- It is possible to control or monitor VRF network system from BMS via BACnet® Gateway.
- Compatible with BACnet® (ANSI / ASHRAE-135-2004) application specific controller (B-ASC).
- Compatible with BACnet®/IP over Ethernet.
- Scheduling function, Alarm & Event functions as well as Electricity Change Apportionment function are provided in BACnet® Gateway.
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
- Corresponds to 7 different languages, English, Chinese, French, German, Spanish, Russian, Polish.

Installation example



Max. 4 VRF network systems

*1: USB adaptor is U10 USB Network Interface of Echelon® Corporation.

Personal computer system requirements

	UTY-ABGX
Operating system	• Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2 • Microsoft® Windows® 7 Home Premium (32-bit or 64-bit) SP1, Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 (32-bit or 64-bit), Windows® 8 Pro (32-bit or 64-bit) • Microsoft® Windows® 8.1 (32-bit or 64-bit), Windows® 8.1 Pro (32-bit or 64-bit) [Supported languages] English, Chinese, French, German, Russian, Spanish, and Polish
CPU	Intel® Core™ i3 2 GHz or higher
Memory	• 2 GB or more (for Windows Vista® and Windows® 7 [32-bit]) • 4 GB or more (for Windows® 7 [64-bit], Windows® 8, and Windows® 8.1)
HDD	40 GB or more of free space
Display	1024 x 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) • USB ports (Maximum of 5 ports) - 1 USB port is required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations.
Software	Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM drive

<Packing list>

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals for BACnet® Gateway.
Wibu Key (Software protection key)	1	Software protection key to be connected to USB port on the BACnet®-installed PC. BACnet® Gateway runs only on a PC with WibuKey.

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

Network Convertor for LONWORKS®

UTY-VLGX

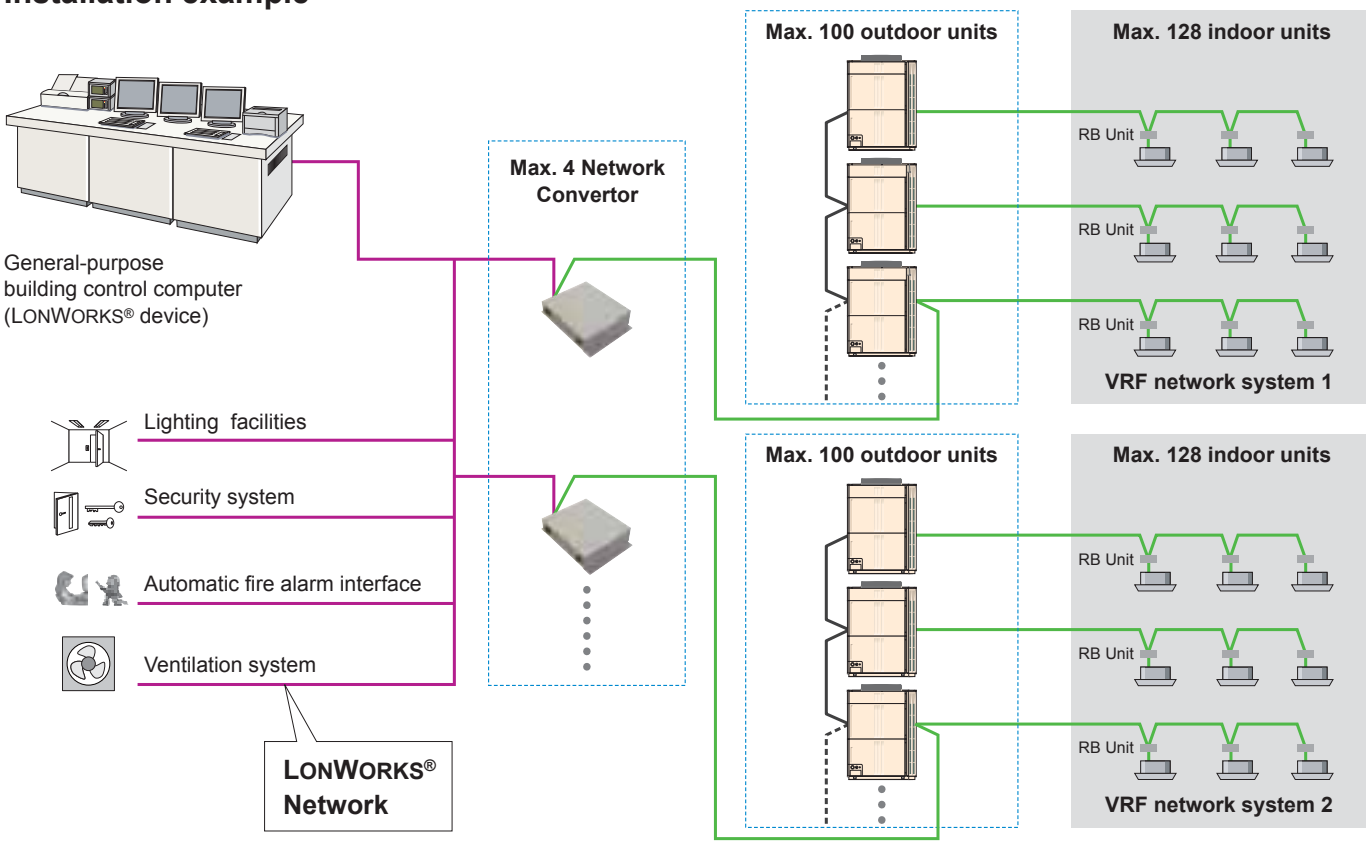
Max. controllable
4
Units to BMS

Max. controllable
100
Outdoor units

Max. controllable
128
Indoor units

- For connection between VRF network system and a LONWORKS® open network for management of small to medium-sized BMS and VRF network system.
- The UTY-VLGX permits central monitoring and control of a VRF network system from a BMS through a LONWORKS® interface.
- Up to 128 Indoor units can be connected to one Network Convertor for LONWORKS®

Installation example



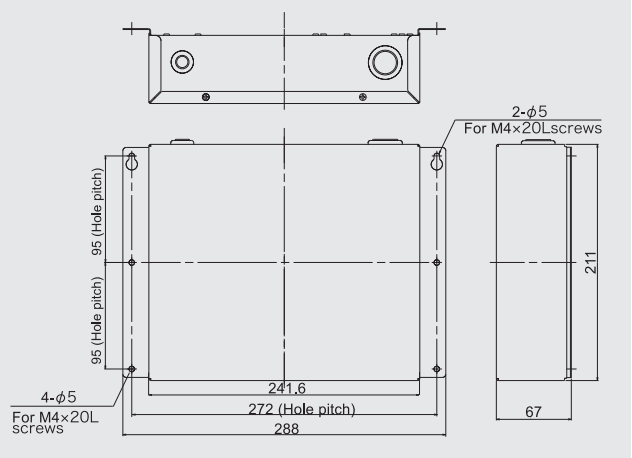
Specifications

Model name	UTY-VLGX
Power Supply	208-240V 50/60Hz, Single phase
Power Consumption (W)	4.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Transmission specifications (BMS side)

Transmission speed	78 kbps
Transceiver	FT-X1 (Echelon® Corporation)
Transmission way form	Free topology
Terminal resistor	None (It attaches at the terminal of a network.)

Dimensions (Unit : mm)



External Switch Controller

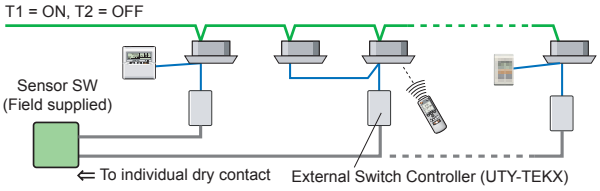
UTY-TEKX

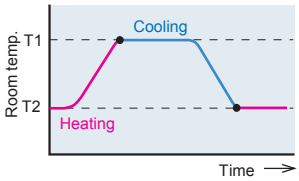
Air conditioner switching can be controlled by
connecting other sensor switches

- In combination with a field supply Card-Key Switch or other sensor, the External Switch Controller allows control of the ON / OFF, Room temperature, Fan speed and Master control functions. This makes this product suitable for installations such as hotel rooms.
- Card-key or other sensor switches are available as a field supplied parts.

Installation example

Auto mode operation, which switches the cooling and the heating automatically, is enabled by using the sensor switch and External Switch Controller.
Note: All indoor units will operate in the same mode.

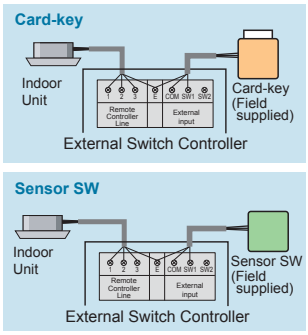




Note 1.
Please choose a thermosensor switch which can be set up for T1 and T2.

Note 2.
The remote controller's operation is prior to the auto mode operation.

Electrical wiring

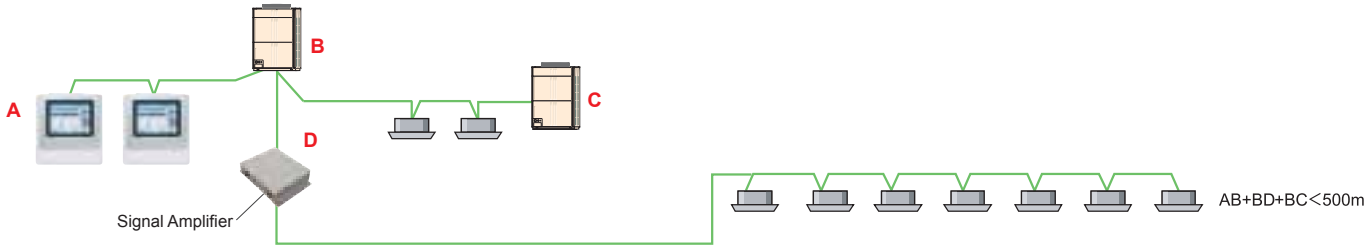


Signal Amplifier

UTY-VSGXZ1

- Transmission Line length can be extended up to 3,600m with multiple Signal Amplifiers.
- Up to 40 signal amplifiers can be installed in a VRF network system.
- A signal amplifier is required,
  (1) When the total wiring length of the transmission line exceeds 500m.
  (2) When the total number of units on the transmission line exceeds 64.

Installation example



Specifications

Model name	UTY-VSGXZ1
Power Supply	208-240V 50/60Hz, Single phase
Power Consumption (W)	4.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Model name	UTY-TEKX
Power Supply	DC 12V
Dimensions (H x W x D) (mm)	120 x 75 x 30
Weight (g)	100

DC12V is supplied by the indoor unit.

Network Convertor

UTY-VGGXZ1

Max. controllable
16
single indoor units

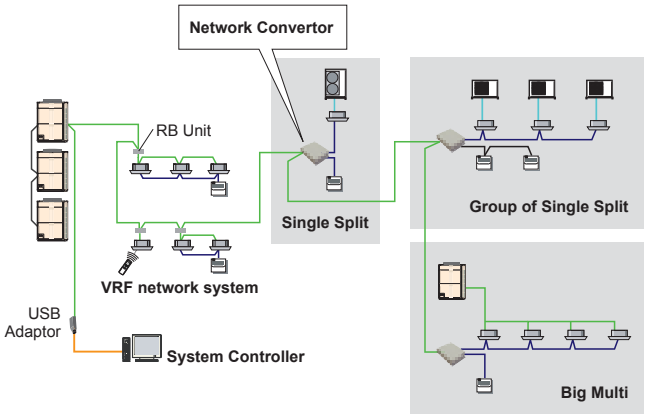
Max. controllable
4
Group Remote Controllers

- This Network Convertor is to be used for connecting single split system or Group Remote Controller (UTY-CGGY / UTY-CGGG) with the VRF network system.
- Please select the function by switching the dip switch during the installation.

Functions

Used for connecting single split system

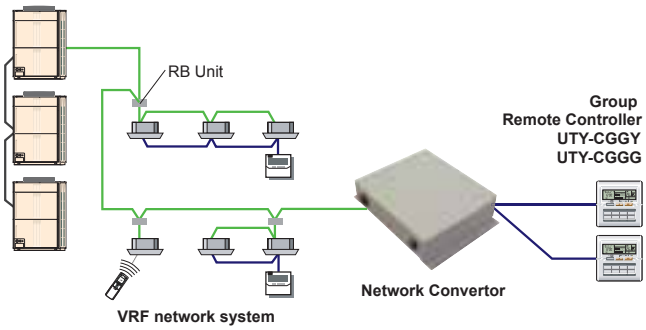
- Split type systems can be centrally controlled from Touch Panel Controller or System Controller through connection to the VRF's network convertor.
- On / Off Control, Master control, Room temperature and Fan speed setting via the Network Convertor are available.
- One Network Convertor can be used to connect and control up to 16 single units.



Please consult your distributor for connectable split type air conditioner.
Up to 100 Network Convertors may be connected in single VRF network system.
One Network Convertor is considered as a single refrigerant system, irrespective of the number of connected single models.

Used for connecting Group Remote Controller

4 Group Remote Controllers can be connected to a single Network Convertor (UTY-VGGXZ1).



* 2 refrigerant circuits can be covered by a single Network Convertor (UTY-VGGXZ1) . Up to a total of 16 Network Convertors (UTY-VGGXZ1) and System Controller adaptors can be connected in a single VRF network system.

Specifications

Model name	UTY-VGGXZ1
Power Supply	208-240V 50/60Hz, Single phase
Power Consumption (W)	8.5
Dimensions (H x W x D) (mm)	67 x 288 x 211
Weight (g)	1,500

Service Tool Software

Max. Monitor
100
Outdoor units

Max. Monitor and control
400
Indoor units

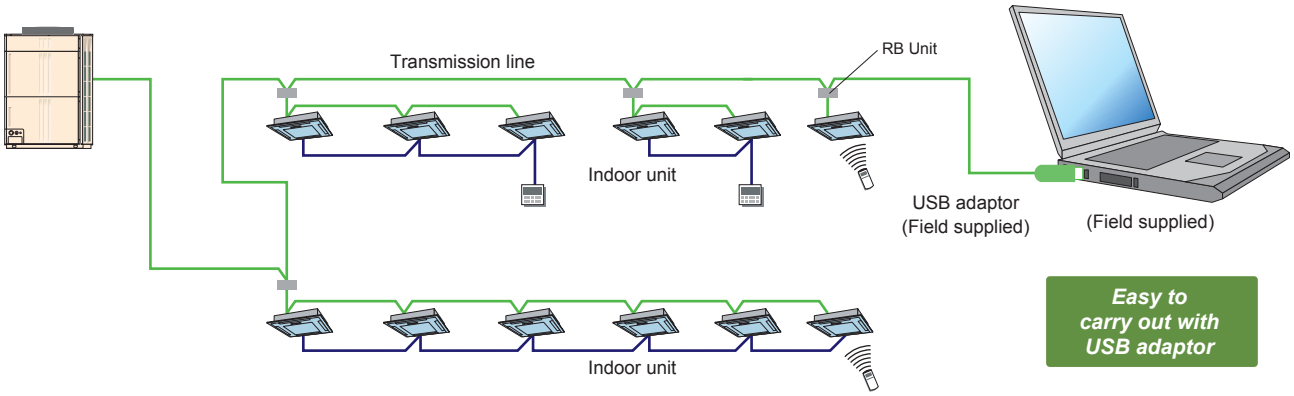
UTY-ASGX

Extensive monitoring and analysis functions for installation and maintenance.

- Operation status can be checked and analyzed to detect even the small abnormalities.
- Data collected and stored on site can be checked later, off-line, off-site for more detail analysis.
- One VRF network system with maximum number of up to 400 units can be monitored and controlled.
- Operation status and various sensor information can be monitored and checked real time in the form of list, refrigerant circuit diagram, graphs as well.
- Simple operation control functions are useful during maintenance.
- The recent error history can be retrieved from units on demand to perform analysis on the cause of the error, after connecting Service Tool to the VRF network system.
- Commissioning tool supports test runs, data storage for each unit and saving of data as CSV files, which may be formatted to create commissioning report.
- Connectable to any point of transmission line with USB adaptor*1 (field supplied)
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
- 14 advanced functions are available for the VR-II series for through servicing and through shooting.
- The operating state (Solenoid valve) of RB unit can be checked.

* 1: Service Tool (UTY-ASGX) will only support USB type network adaptor and will not support transmission adaptor of the traditional type(UTR-YTMA)

Wiring connection



Easy to carry out with USB adaptor

*USB Adaptor is U10 USB Network interface of Echelon® Corporation.

Functions

1) System List

Displays the overall operation status of all or specified units in the system in a list form.

2) Equipment Detail (Diagram)

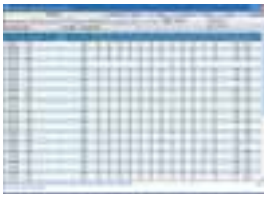
Displays the detail information for sensor values, electrical components etc. for the specified units in schematic. The information here can be used along with the detail information in list form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

3) Equipment Detail (List)

Displays the detail information for sensor values, electrical components etc. of units in a specified refrigerant system in list form. The information here can be used along with the detail information in diagram form, to check the operation status of units and make detail analysis on the cause, in case an error occurs.

4) Operation History

The indoor units or outdoor unit operation history can be recorded. The displayed operation history can be printed out and saved to a CSV file.



5) Error History

Displays the error information for each unit. The error information can sequentially be displayed up to 50 items as they occur starting with the latest error.

6) Remote File Download

Operation and error history data can be downloaded. Only the required data may be downloaded specifying the refrigerant system, unit and time range.

7) Commissioning Tool

Test run commands can be executed with this tool.
During test running, the outdoor unit / indoor unit sensor data can be saved (commissioning log data).
After the end of test running, this data can be exported in CSV file format.

8) Network Topology Analyzer *

A list of units connected to the VRF system network is displayed in network segments in tree form.

9) Remote Setting *

Function (Field) Setting for indoor unit is realized remotely

10) System Time Setting *

An arbitrary time is set for all the remote controllers within the system.

11) Central Release *

The operation setting restriction function of the indoor units set from the controller can be forcibly released.(remote controller inhibit, temperature upper/lower limit setting)

12) Model Name Writer *

An arbitrary model name can be written to the target unit.

13) Error Memory Reader *

When an error occurs at an outdoor unit, the operation data records before the error are acquired over a network and saved to a CSV file.

Note: To perform "Error Memory Reading", Service Tool and the corresponding outdoor unit must be connected directly with each other. Refer to the Operation Manual of the Service Tool for detail.

14) Time Guard Information *

Reference data for judging the maintenance period of indoor and outdoor units (compressor,FAN, etc. integrated time) is output to a CSV file.

*: Supported by Ver. 1.1 or later

Personal computer system requirements

	UTY-ASGX
Operating system	• Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 Pro (32-bit or 64-bit)
CPU	1 GHz or higher
Memory	• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], and Windows® 8 [32-bit]) • 2 GB or more (for Windows® 7 [64-bit] and Windows® 8 [64-bit])
HDD	10 GB or more of free space
Display	1024 x 768 or higher resolution
Interface	• 2 USB ports - 1 USB port is required for WibuKey connection - 1 USB port is required for Echelon® U10 USB Network Interface
Software	Internet Explorer® 8.0 or 9.0 or 10.0 / Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM drive

<Packing list>

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals
WibuKey (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

Web Monitoring Tool

Software

UTY-AMGX

VRF network systems can be supported
4

Max. Monitor
400
Outdoor units

Max. Monitor and control
1,600
Indoor unit can be monitored

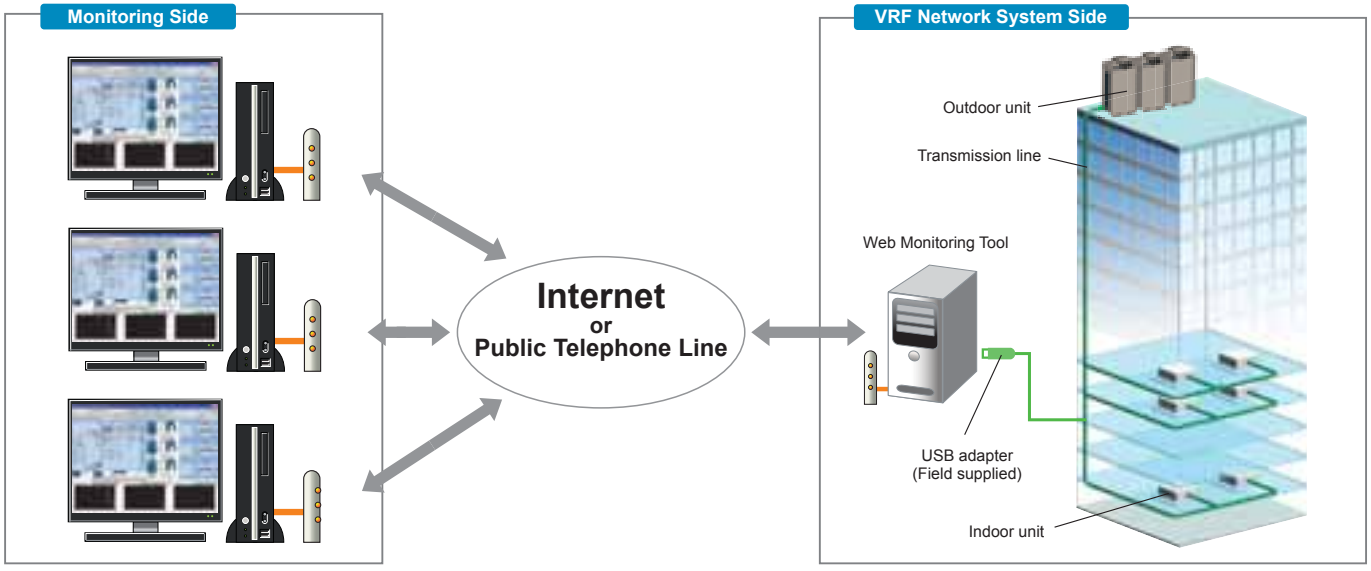
Product features

- Troubleshooting is performed by monitoring each unit remotely during periodical system checks off-site.
- Operation status can be checked and analyzed to detect even the smallest abnormalities.
- Four VRF network systems each with 400 units, with maximum number of up to 1,600 units can be monitored and controlled.
- Operation status and various sensor information can be monitored and checked real time in the form of list, refrigerant circuit diagram, and graphs as well.
- The monitoring data in a remote side can be optionally downloaded. And, this data can be displayed in off-line mode of the Service Tool.
- Error notification can be automatically transmitted to several locations using the internet*1.
- Monitoring side computer is not required to install special software, requires only general web browser.
- Connectable to any point of transmission line with U10 USB interface*2 (field supplied)
- Connection between VRF network system to personal computer is possible via small U10 USB interface. However, both U10 USB interface & personal computer are field supplied items.
- The operating state (Solenoid valve) of RB unit can be checked.

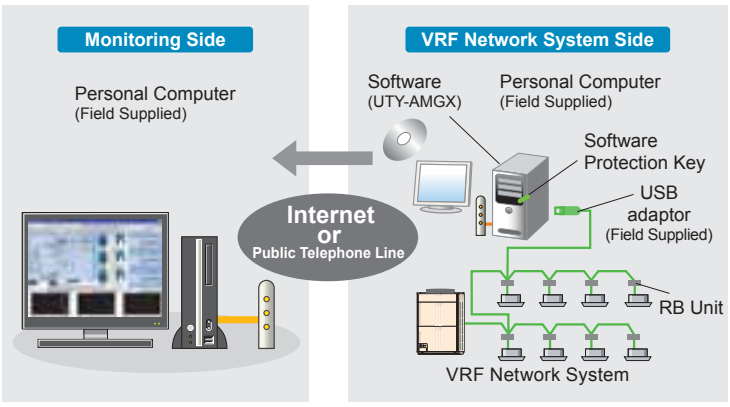
* 1: USB of internet mail system required.

* 2: Web Monitoring Tool (UTY-AMGX) will only support USB type network adaptor and will not support transmission adaptor of the traditional type (UTR-YTMA).

Web Monitoring System

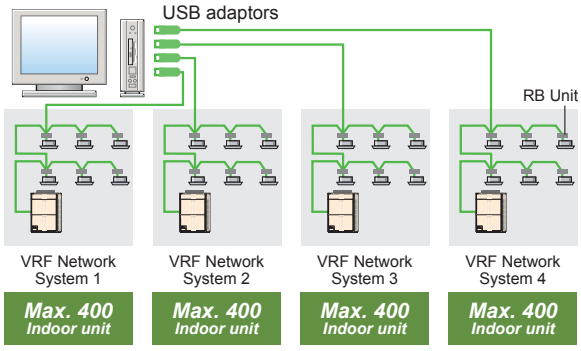


System components



Support 4 VRF network systems

USB adaptor (max. 4 adaptors per PC) permit, monitoring of up to 1,600 indoor units. Suitable for large-scale buildings or hotels.



COMPARISON TABLE

No.	Item	Service Tool UTY-ASGX	Web Monitoring Tool UTY-AMGX	
			VRF network system Side	Monitoring Side
1	Interchangeability of equipment	●	●	●
2	Indication of equipment list	●	●	●
3	Operation control	●	●	—
4	Indication of refrigerant circuit diagram	●	●	●
5	Commissioning tool	●	●	—
6	Monitoring of equipment information	●	●	●
7	Monitoring of operating condition	●	●	●
8	Monitoring of sensor data	●	●	●
9	Storage and CSV output of operating history (sensor data)	●	●	●
10	Indication of trend graph	●	●	●
11	Printing of trend graph	●	●	●
12	Monitoring and screen display of abnormalities	●	●	●
13	E-mail automatic transmission of abnormalities	—	●*1	—
14	Setting for user level	—	●	—
15	Network Topology Analyzer *	●	●	—
16	Remote Setting *	●	●	—
17	System Time Setting *	●	●	—
18	Central Release *	●	●	—
19	Model Name Writer *	●	—	—
20	Error Memory Reader *	●	—	—
21	Time Guard Information *	●	●	●

*: Supported by Ver. 1.1 or later
*1: it is available only during a connection to the Internet.

Personal computer system requirements

	UTY-AMGX
Operating system	• Microsoft® Windows Vista® Home Premium (32-bit) SP2, Windows Vista® Business (32-bit) SP2 • Microsoft® Windows® 7 Professional (32-bit or 64-bit) SP1 • Microsoft® Windows® 8 Pro (32-bit or 64-bit)
CPU	1 GHz or higher
Memory	• 1 GB or more (for Windows Vista®, Windows® 7 [32-bit], and Windows® 8 [32-bit]) • 2 GB or more (for Windows® 7 [64-bit] and Windows® 8 [64-bit])
HDD	40 GB or more of free space
Display	1024 x 768 or higher resolution
Interface	• Ethernet port (for getting access to the Internet using LAN) or Modem (for getting access to the Internet using Public Telephone Line) • USB ports (Maximum of 5 ports) - 1 USB port is required for WibuKey connection - Maximum of 4 USB ports are required for Echelon® U10 USB Network Interface * Maximum number of required USB ports depends on the applicable system configurations.
Software	Internet Explorer® 8.0 or 9.0 or 10.0 / Adobe® Reader® 9.0 or later
Optical drive	DVD-ROM drive

<Packing list>

Name and shape	Quantity	Application
DVD-ROM	1	Includes the software and manuals
Wibu Key (Software protection key)	1	Software protection key to be connected to USB port on the Service Tool-installed PC. These products runs only on a PC with WibuKey.

•Personal computer that satisfies the following system requirements
•Echelon® U10 USB Network Interface – TP/FT-10 Channel (Model number: 75010R) (Required for each VRF Network.)

VENTILATION

EFFECTIVE HEAT EXCHANGE AND SIMULTANEOUS FRESH AIR VENTILATION

High Efficiency and low noise levels are achieved by using a highly efficient heat exchange process. A comfortable air conditioned space is achieved by conveniently selecting whether to use heat exchange or normal ventilation setting, according to the requirements of the conditioned space.

ENERGY RECOVERY VENTILATOR

OUTDOOR AIR UNIT

AIRSTAGE™

Energy Recovery Ventilator

Models

UTZ-BD025B
UTZ-BD035B
UTZ-BD050B
UTZ-BD080B
UTZ-BD100B

Energy recovery ventilator unit offers maximum comfort and greater energy savings.

UTZ-BD025B

UTZ-BD035B

UTZ-BD050B

UTZ-BD080B

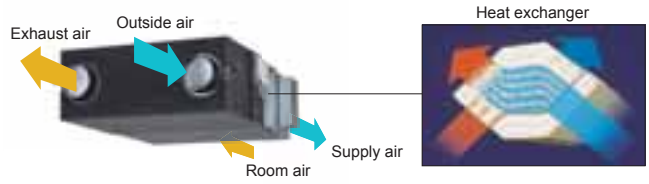
UTZ-BD100B

Heat exchange ventilation and normal ventilation

Heat exchange ventilation
When a room is cooled or heated, the exhausted cooling / heating energy is recovered by heat-exchange ventilation.

Normal ventilation
The operation is used during periods when the room space requires no cooling or heating effect, i.e. when there is minimal temperature difference between the indoor and outdoor environments.

Adopts a highly efficient counter-flow heat exchange element



Specifications

Rated flow rate				250 m³/h	350 m³/h	500 m³/h	800 m³/h	1000 m³/h
Model No.				UTZ-BD025B	UTZ-BD035B	UTZ-BD050B	UTZ-BD080B	UTZ-BD100B
Power source				220 - 240V, 50Hz				
HEAT EXCHANGE VENTILATION	Input power	Extra high / High / Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311
	Air flow rate	Extra high / High / Low	m³/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700
	External static pressure	Extra high / High / Low	Pa	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75
	Temperature Exchange Efficiency	Extra high / High / Low	%	75 / 75 / 77	75 / 75 / 78	75 / 75 / 76	75 / 75 / 76	75 / 75 / 79
	Energy Exchange Efficiency Cooling	Extra high / High / Low	%	63 / 63 / 65	66 / 66 / 71	62 / 62 / 64	65 / 65 / 68	65 / 65 / 70
	Energy Exchange Efficiency Heat pump	Extra high / High / Low	%	70 / 70 / 72	69 / 69 / 73	67 / 67 / 69	71 / 71 / 74	71 / 71 / 76
	Sound pressure level	Extra high / High / Low	dB*	31.5 / 30.5 / 26.5	33 / 31 / 25.5	37.5 / 35.5 / 32.5	37.5 / 37 / 34.5	38.5 / 37.5 / 34.5
NORMAL VENTILATION	Input power	Extra high / High / Low	W	128 / 123 / 96	190 / 185 / 168	289 / 225 / 185	418 / 378 / 295	464 / 432 / 311
	Air flow rate	Extra high / High / Low	m³/h	250 / 250 / 190	350 / 350 / 240	500 / 500 / 440	800 / 800 / 630	1000 / 1000 / 700
	External static pressure	Extra high / High / Low	Pa	105 / 95 / 45	140 / 60 / 45	120 / 60 / 35	140 / 110 / 55	105 / 80 / 75
	Sound pressure level	Extra high / High / Low	dB*	31.5 / 30.5 / 26.5	33 / 31 / 25.5	38.5 / 38 / 32.5	37.5 / 37 / 34.5	40.5 / 39.5 / 36.5
Dimensions (W × D × H)			mm	882 x 599 x 270	1050 x 804 x 317	1090 x 904 x 317	1322 x 884 x 388	1322 x 1134 x 388
Weight			kg	29	49	57	71	83
Outlet duct diameter			mm	150	150	200	250	250
Operation range			°C	-10 ~ 40	-10 ~ 40	-10 ~ 40	-10 ~ 40	-10 ~ 40
Maximum humidity			%	85	85	85	85	85

* The noise level must be measured 1.5 m below the centre of the unit.

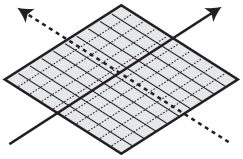
Energy efficiency and ecology

Energy consumption is dramatically reduced by using a counterflow heat-exchange element. Air conditioning load is reduced by approximately 20%, resulting in significant energy savings. Recovers up to 77% of the heat in the outgoing air.

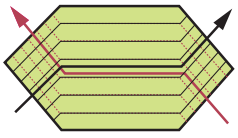
20%
Energy saving

Features of heat exchange element

With the cross-flow element, air moves in a straight line across the element. With the counter-flow element , air flows through the element for a longer time (longer distance) ,so the heat-exchange effect remains unchanged.



Other element
(Cross-flow element)



Fujitsu element
(Counter-flow element)

Quiet operation

Significantly reducing low pressure loss and noise allows low-noise operation.

Extended range of an external static pressure

An external static pressure is improved by adopting a powerful fan motor.
This allows for application in a wide variety building.

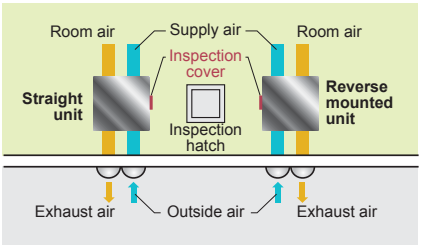
Slim shape and easier installation

Counter-flow heat exchange element used for reduced noise and slimmer, more compact body shape.

Reverse mountable direct air supply / exhaust system

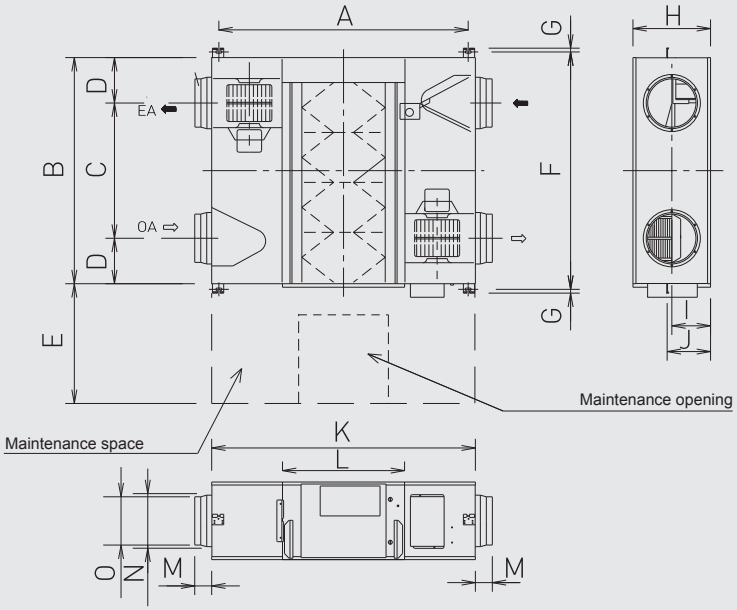
Adoption of straight air supply / exhaust system: Duct design is simplified because the air supply / exhaust ducts are straight.

Since each unit can be mounted in reverse position, only one inspection hole is needed for two units: Two units can share one inspection hole so duct work is easier and more flexible.



Dimensions (Unit : mm)

Models: UTZ-BD025B / UTZ-BD035B / UTZ-BD050B / UTZ-BD080B / UTZ-BD100B



	UTZ-BD025B	UTZ-BD035B	UTZ-BD050B	UTZ-BD080B	UTZ-BD100B
A	810	978	1018	1250	1250
B	599	804	904	884	1134
C	315	580	640	428	678
D	142	112	132	228	228
E	600	600	600	600	600
F	655	860	960	940	1190
G	19	19	19	19	19
H	270	317	317	388	388
I	135	159	159	194	194
J	159	182	182	218	218
K	882	1050	1090	1322	1322
L	414	470	470	612	612
M	95	70	127	85	85
N	219	162	210	258	258
O	144	144	194	242	242

Outdoor Air Unit

Models
ARXH054GTAH
ARXH072GTAH
ARXH096GTAH

The heat pump method efficiently processes the outdoor air for cooling and heating and supplies 100% fresh air into a room.

ARXH054GTAH

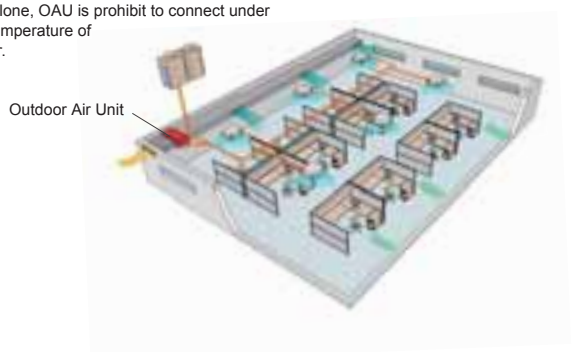
ARXH072GTAH

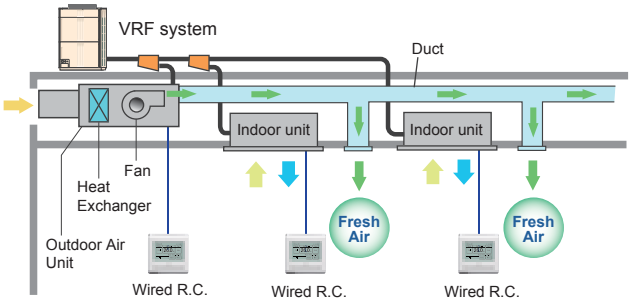
ARXH096GTAH

One VRF system can provide air conditioning and air supply at the same time.

Outdoor Air Unit can be connected in a same VRF*1 system as one of indoor unit series and can create fresh and comfortable air supply together from our high advanced technology.

*1. Connectable VRF series:J-II, V-II, VR-II
In J-II series alone, OAU is prohibit to connect under the ambient temperature of 40°C or higher.





* Make sure the connected capacity is within the range of 50% to 100% of the outdoor unit capacity. In addition, if there are mixed connections with indoor units, make the Outdoor Air Unit connection capacity 30% or less of the outdoor unit capacity.

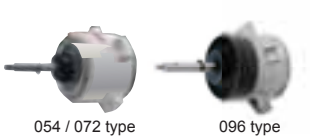
Specifications

Rated flow rate			1000 m³/h	1500 m³/h	2000 m³/h
Model No.			ARXH054GTAH	ARXH072GTAH	ARXH096GTAH
Power source			230/1/50	230/1/50	230/1/50
Capacity	Cooling	kW	14.0	22.4	28.0
	Heating		8.9	13.9	17.4
Input Power	Cooling / Heating	W	179	292	370
Airflow Rate		m³/h (l/s)	1,080 (300)	1,680 (467)	2,100 (583)
Static Pressure	Standard (range)	Pa	185 (50-185)	200 (50-200)	200 (50-240)
Sound Pressure Level		dB (A)	42	44	47
Dimensions (H x W x D)		mm	425×1,367×572	425×1,367×572	450×1,583×700
Weight		kg	48	55	71
Connection Pipe Diameter (Small / Large)		mm	Ø9.52/Ø19.05	Ø12.70/Ø22.22	Ø12.70/Ø22.22
Operation Range	Cooling	°CDB	5 to 43	5 to 43	5 to 43
	Heating		-7 to 21	-7 to 21	-7 to 21
Refrigerant			R410A	R410A	R410A

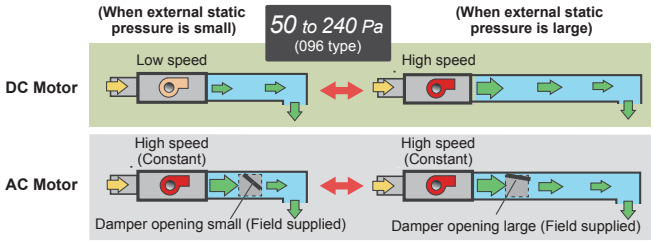
Note : Specifications are based on the following conditions.
Cooling : Outdoor temperature of 33°CDB / 28°CWB.
Heating : Outdoor temperature of 0°CDB / -2.9°CWB.
Pipe length : 7.5 m Voltage : 230 [V].

High energy savings and flexible duct design by using DC motor

- Greatly reduces electricity consumption by adopting permanent magnet compared to when using an AC motor.

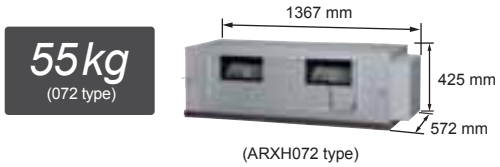


- Compared with AC motor, changing the speed makes it possible to respond flexibly to the external static pressure from 50 Pa to 240 Pa. Even if damper equipment is not used, static pressure can be adjusted and duct design is easy.
- Static pressure can be set easily using wired remote controller.



Top class compact design

- Top class lightweight compact design at just 425 mm in height, 55 kg in weight for ARXH072 type. This unit can be installed easily even at narrow space.

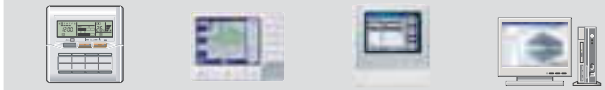


Various Controller

Supplied variety of controllers as options, such as individual controller, central controller, and building management controller.

Individual Controller

Central Controller

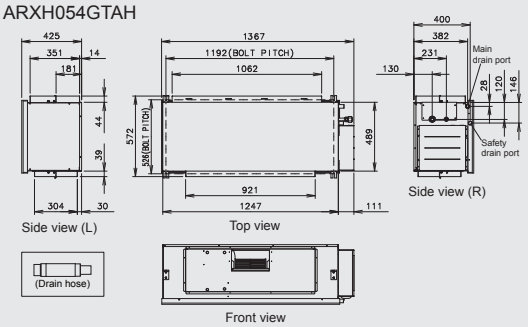


* The temperature setting is discharged air temperature setting. The air volume is set to a constant speed.

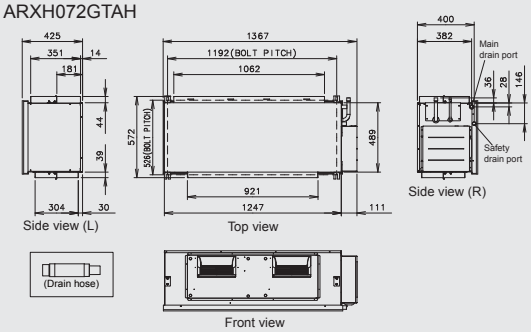
Dimensions (Unit : mm)

Models: ARXH054GTAH / ARXH072GTAH / ARXH096GTAH

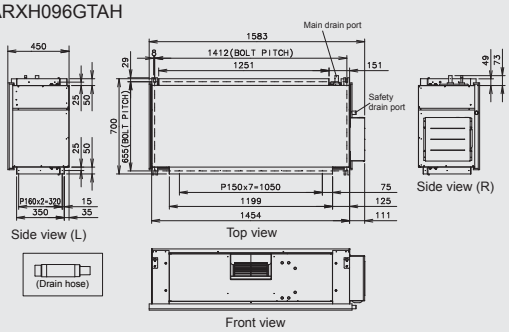
ARXH054GTAH

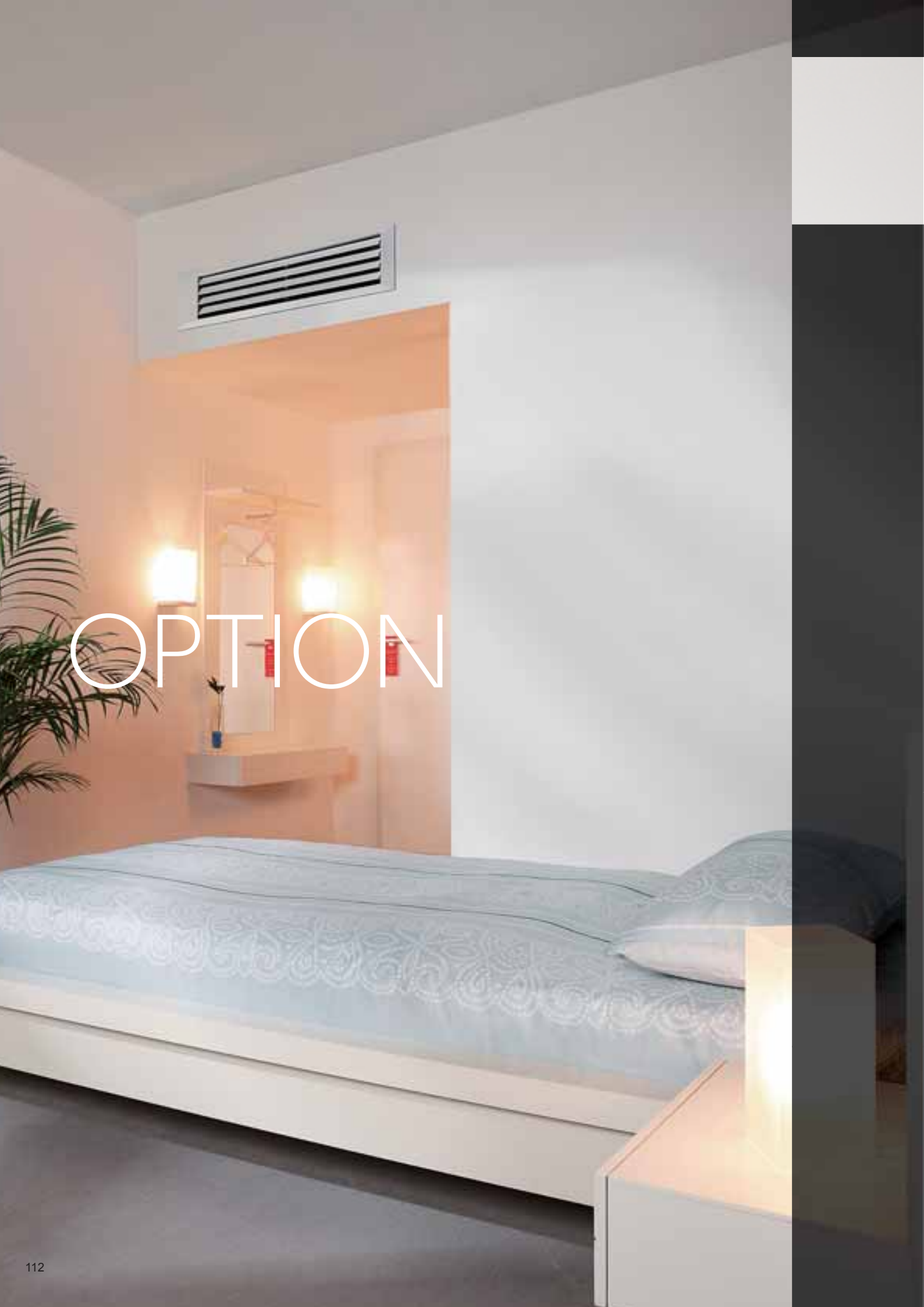


ARXH072GTAH



ARXH096GTAH



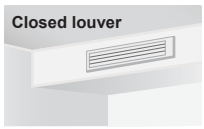

OPTION

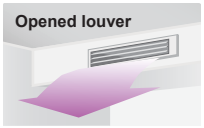
Auto Louver Grille Kit (Option)

Models

UTD-GXSA-W
UTD-GXSB-W
UTD-GXSC-W

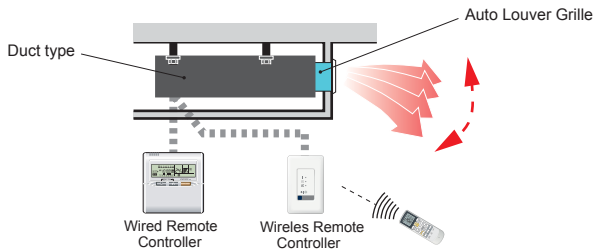
Simple flat Auto Louver will provide comfort airflow and harmonize with luxury interior.



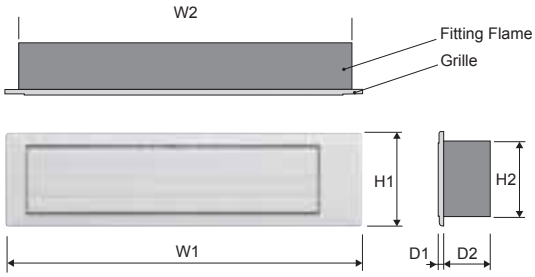


Flexible Control

- **Operation with indoor unit**
  Auto Louver can be operated by synchronizing remote controller of indoor unit.
- **UP and Down auto swing**
  • Auto airflow direction and auto swing
  • 4 steps selectable
- **Auto-closing louver**
  When operation of indoor unit is stopped, the louver will automatically close.



Dimensions



Unit: mm

Model Name	W1	W2	H1	H2	D1	D2
UTD-GXSA-W	683	645	180	148	9	84
UTD-GXSB-W	883	845				
UTD-GXSC-W	1,083	1,045				

Specifications

Model name			UTD-GXSA-W	UTD-GXSB-W	UTD-GXSC-W
Applicable Indoor Unit			ARXD07/09/12/14GALH	ARXD18GALH	ARXD24GALH
Power Supply			Connecting with Control box of indoor unit		
Fixing of Auto Louver Grille			Screw fixing to Flange or Square Duct		
Extension Square Duct Limit			1.0m (Max. duct length between indoor unit and Grille)		
Net Dimension (H x W x D)		mm (inch)	180x683x(84+9) [7-3/32x26-7/8x(3-5/16+11/32)]	180x883x(84+9) [7-3/32x34-3/4x(3-5/16+11/32)]	180x1083x(84+9) [7-3/32x42-5/8x(3-5/16+11/32)]
Weight	Net	kg (lb.)	2.0 (4.4)	2.5 (5.6)	3.0 (6.7)
	Gross		3.0 (6.7)	3.5 (7.8)	4.0 (8.9)
Color			White		
Louver Motor			Stepping Motor		
Accessories			Fitting Flame, etc.		
Operation range	Cooling	°C (°F)	18 to 32 (64 to 90)		
		% RH	80% or less		
	Heating	°C (°F)	16 to 30 (60 to 88)		

*: The Auto Louver Grille Kit can also be installed to ARXD07/09/12/14/18/24LATH revision code B models.
Please refer to the Design & Technical manual for "revision code " details.

Optional Parts

Connection Units

Separation Tube

UTP-AX054A

UTP-AX090A

UTP-AX180A

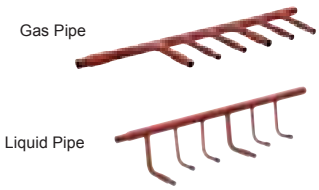
UTP-AX567A

UTP-BX090A

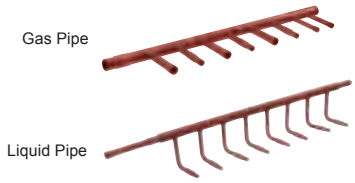
UTP-BX180A

UTP-BX567A

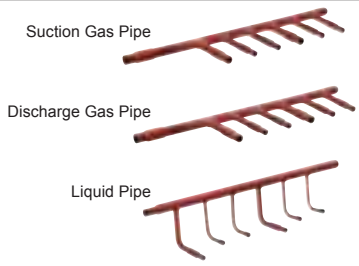
Header



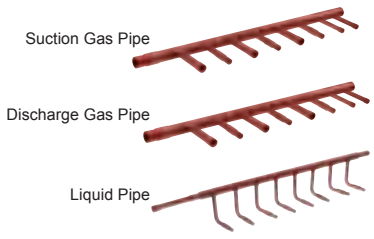
UTR-H0906L / UTR-H1806L



UTR-H0908L / UTR-H1808L

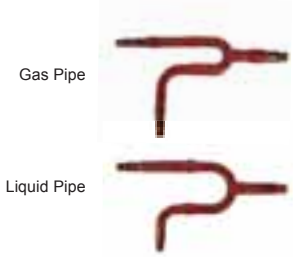


UTP-J0906A / UTP-J1806A

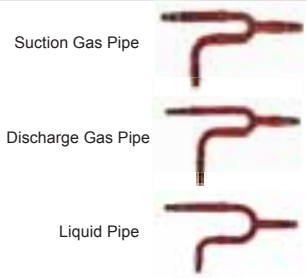


UTP-J0908A / UTP-J1808A

Outdoor Unit Branch Kit



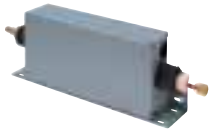
UTP-CX567A



UTP-DX567A

EV Kit

For Compact Wall Mounted type



Model code ≦ 09 : UTR-EV09XB
Model code ≧ 12 : UTR-EV14XB

RB Unit

Single type

UTP-RX01AH / UTP-RX01BH / UTP-RX01CH

Multi type

UTP-RX04BH

Specifications

Separation Tube

Model name	UTP-AX054A (for J-IIS only)	UTP-AX090A	UTP-AX180A	UTP-AX567A
Total cooling capacity of indoor unit (kW)	19.6 or less	28.0 or less	28.1 to 56.0	56.1 or more

Model name	UTP-BX090A (for VR-II)	UTP-BX180A (for VR-II)	UTP-BX567A (for VR-II)
Total cooling capacity of indoor unit (kW)	28.0 or less	28.1 to 56.0	56.1 or more

Header

Model name			
	3-6 Branches	UTR-H0906L	UTR-H1806L
	3-8 Branches	UTR-H0908L	UTR-H1808L
Total cooling capacity of indoor unit (kW)		28.0 or less	28.1 to 56.0

Model name			
	3-6 Branches	UTP-J0906A (for VR-II)	UTP-J1806A (for VR-II)
	3-8 Branches	UTP-J0908A (for VR-II)	UTP-J1808A (for VR-II)
Total cooling capacity of indoor unit (kW)		28.0 or less	28.1 to 56.0

Outdoor unit Branch kit

Model name		UTP-CX567A (for V-II)	UTP-DX567A (for VR-II)
Number of Outdoor unit	2 outdoor units	1	
	3 outdoor units	2	

EV Kit

Model name	UTR-EV09XB	UTR-EV14XB
Application Model	ASYE07GACH ASYE09GACH	ASYE12GACH ASYE14GACH

RB Unit

Type		Single type			Multi type
Model name		UTP-RX01AH	UTP-RX01BH	UTP-RX01CH	UTP-RX04BH
Power source		Single phase 230V, 50Hz			
Input power	W	17	24	31	96
Number of branches		1	1	1	4
Maximum capacity of connectable indoor units(Q)	kW	Q ≦ 8.0	Q ≦ 18.0	Q ≦ 28.0	Q ≦ 56.0 *1
Maximum capacity of connectable indoor units per branch(Q)	kW	Q ≦ 8.0	Q ≦ 18.0	Q ≦ 28.0	Q ≦ 18.0
Maximum number of connectable indoor units per branch		3	8	8	8
Dimensions (H×W×D)	mm	198×298×268			260×658×428

*1: In case of two RB units connected in series (total 8-branches), maximum capacity of connectable indoor units is up to 56.0kW.

Optional Parts

Controllers

For Individual Control

Wired Remote Controller (Touch Panel)
UTY-RNRY

Wired Remote Controller
UTY-RNKYT

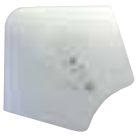
Simple Remote Controller
UTY-RSKYT
With operation mode

Simple Remote Controller
UTY-RHKYT
Without operation mode

Wireless Remote Controller
UTY-LNHY

IR Receiver Unit
UTB-TWC
For All Duct type

IR Receiver Unit
UTY-LRHYB1
For Cassette type



For Centralized Control

Group Remote Controller
UTY-CGGY

Central Remote Controller
UTY-DCGY

Touch Panel Controller
UTY-DTGY

System Controller Lite Software
UTY-ALGX

System Controller Software
UTY-APGX

Convertors / Adaptors

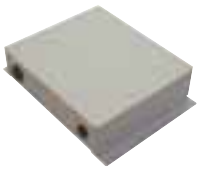
For External device

BACnet® Gateway Software
UTY-ABGX

DVD-ROM (Software)

Software Protection Key

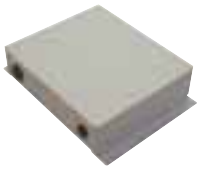
Network Convertor for LONWORKS®
UTY-VLGX



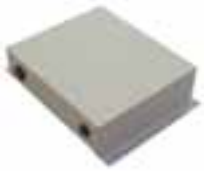
External Switch Controller
UTY-TEKX

For System expansion

Network Convertor
UTY-VGGXZ1



Signal Amplifier
UTY-VSGXZ1



Panels

For Cassette type

Cassette Grille
UTG-UFYC-W
For Compact Cassette type

Cassette Grille
UTG-UGYA-W
For Cassette type

Optional Parts

Others

Communication system: External Connect Kit

For Indoor unit

UTY-XWZXZ7

UTY-XWZXZB

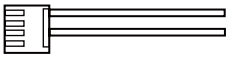
UTY-XWZXZC

UTY-XWZXZD

UTY-XWZXZE

For Outdoor unit

UTY-XWZXZ6

UTY-XWZXZ9 

UTY-XWZXZF

For RB unit

UTY-XWZXZ6

UTY-XWZXZB

For Central Remote Controller

UTY-XWZXZ7

UTY-XWZXZ8

UTY-XWZXZA

For Touch Panel Controller

UTY-XWZXZA

Function list

		Indoor unit	Outdoor unit	Controller		Other
				Central Remote Controller	Touch Panel Controller	RB Unit
Input	Operation / Stop	● UTY-XWZXZD ○ UTY-XWZXZB	—	—	—	—
	All On / All Off	—	—	● UTY-XWZXZ7 ○ UTY-XWZXZ8	—	—
	Batch Stop	—	● UTY-XWZXZ6	—	—	—
	Forced Stop	● UTY-XWZXZD ○ UTY-XWZXZB	—	—	—	—
	Emergency Stop	● UTY-XWZXZD ○ UTY-XWZXZB	● UTY-XWZXZ6	● UTY-XWZXZ7 ○ UTY-XWZXZ8	—	—
	Forced Thermostat off	● UTY-XWZXZE ○ UTY-XWZXZ7	—	—	—	—
	Low Noise Mode Operation	—	● UTY-XWZXZ6	—	—	—
	Cooling / Heating Priority	—	● UTY-XWZXZ6*1	—	—	● UTY-XWZXZ6 ○ UTY-XWZXZB
	"Outdoor Unit Operation Peak Control"	—	● UTY-XWZXZ6	—	—	—
	"Power Usage Information from Electricity Meter"	—	● UTY-XWZXZF	—	—	—
Output	Operation Status	● UTY-XWZXZC	○ UTY-XWZXZ6	○ UTY-XWZXZA	○ UTY-XWZXZA	—
	Error Status	● UTY-XWZXZC	○ UTY-XWZXZ6	○ UTY-XWZXZA	○ UTY-XWZXZA	—
	Indoor Unit Fun Operation Status	● UTY-XWZXZC	—	—	—	—
	Auxiliary Heater Output	● UTY-XWZXZC*2	—	—	—	—
	Base Heater	—	● UTY-XWZXZ9	—	—	—

*1. Heat Pump type only *2. Duct type only

● : Dry Contact ○ : Apply Voltage

For Duct type

Flange (Round)
UTD-RF204

For Medium Static Pressure Duct type / Ceiling type

Flange (Square)
UTD-SF045T

For Medium Static Pressure Duct type

Remote Sensor Unit
UTY-XSZX

For All Duct type

New amenity space can be offered by installing the Remote sensor.

Long-Life Filter
UTD-LF25NA

For Medium Static Pressure Duct type

UTD-LF60KA

For High Static Pressure Duct type

Auto Louver Grille Kit
UTD-GXSA-W (for ARXD07/09/12/14GALH)
UTD-GXSB-W (for ARXD18GALH)
UTD-GXSC-W (for ARXD24GALH)

For Slim Duct type

Drain Pump Unit
UTZ-PX1BBA

For Low Static Pressure Duct type

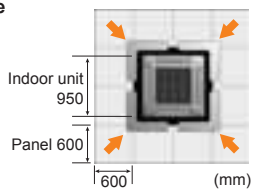
UTZ-PX1NBA

For Medium Static Pressure Duct type

For Cassette type

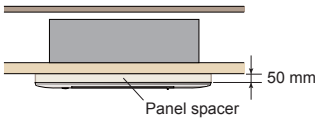
Wide Panel
UTG-AGYA-W

For Cassette type

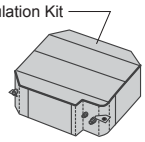


Panel Spacer
UTG-BGYA-W

For Cassette type



Insulation Kit for High Humidity
UTZ-KXGA **For Cassette type**
UTZ-KXGB **For Slim Cassette type**
UTZ-KXGC **For Compact Cassette type**



Fresh Air Intake Kit
UTZ-VXAA

For Compact Cassette type

UTZ-VXGA

For Cassette type

Air Outlet Shutter Plate
UTR-YDZB

For Compact Cassette type

Shuts the air outlet when only using as 3 blow out.

Air Outlet Shutter Plate
UTR-YDZC

For Cassette type

Shuts the air outlet when only using as 3 blow out.

For Ceiling type

Drain Pump Unit
UTR-DPB24T

For Ceiling type

Applications

There are many applications for Airstage VRF systems including such markets as education, healthcare,hospitality, utilities, office buildings, apartment buildings, condominiums, and restaurants.

Note: VRF Heat Recovery system provides simultaneous Heating and Cooling. System operates both Heating mode and Cooling mode.

Medical and Healthcare Facilities

VRF gives each patient individual control of their room temperature. Central control ensures that air conditioning is only delivered to rooms that are occupied.

INDIVIDUAL CONTROL

VRF gives each patient or each room individual control of their room temperature.

CLEAN AIR

VRF systems can use ductless indoor units reducing the time and expense of maintaining a HVAC system and eliminating the risk of duct-borne molds and bacteria.

CENTRAL CONTROL

Powerful central control ensures that heating and cooling are delivered to rooms that are occupied. This provides enormous savings for facilities with revolving occupancy.

MAINTENANCE

Since each refrigerant circuit has the ability to operate independently, a properly designed VRF system can add a layer of security to a HVAC system. If an individual unit needs to be shut down for repairs, the rest of the system can operate normally.

FRESH AIR

VRF systems can be integrated with fresh air systems to ensure that air quality meets the needs of the occupants. VRF provides the most comfortable environment for all occupants.

Educational and Religious Facilities

In a school, an investment in VRF is an investment in your community. VRF is more efficient than conventional systems, providing financial savings to the school for many years. Also, a quiet VRF system creates a much better learning environment for students.

HEALTHIER FACILITY
VRF systems can be integrated with fresh air systems to ensure that air quality meets the needs of the teachers and students.

CENTRAL CONTROL
Powerful central control can monitor and control individual schools, or an entire college campus, from a single location.

ZONING
Save energy by heating and cooling the classrooms that are occupied. Set temperature can pre-programmed to meet the energy budget for the school district.

COMFORT
VRF helps achieve a healthier, quieter, more comfortable and productive learning environment.

Applications

Multi-Tenant Dwellings

VRF improves the quality of multi-tenant buildings while reducing tenant complaints. High quality VRF systems let owners save on energy costs and reduced maintenance costs. With VRF, each tenant has individual control over the temperature setting for the comfort of their home.

QUALITY
By delivering quiet, efficient heating and cooling, VRF improves the quality of multitenant buildings and reduces tenant complaints.

ENERGY SAVINGS
Efficient VRF systems reduce the total energy costs for buildings over most other options. High quality systems reduce maintenance and service costs.

INDIVIDUAL BILLING
Using the Energy Charge Apportionment feature, landlords can easily bill each tenant for the percentage of total energy the individual tenant consumes.

INDIVIDUAL COMFORT
With VRF, each tenant can have their own controller to set their room temperature for their maximum comfort.

CONVENIENT CENTRAL CONTROL
Landlord can monitor and control all indoor units from a central location. Landlord can even troubleshoot or solve tenant complaints remotely.

QUIET
Indoor units ensures a quiet, comfortable living environment for all tenants.

Office Buildings and Retail Spaces

VRF provides a comfortable work environment for all employees. Zoning ensures that energy is only used to cool/heat occupied offices. Quiet indoor units and precise temperature control creates the most comfortable and productive work environment.

QUIET
Indoor units and outdoor units creates a pleasant work environment and reduces noise complaints.

ZONING
Save energy by heating and cooling occupied offices. No more hot/cold calls since each zone or tenant has individual control of the set temperature..

CONTROL
Powerful controls options can manage and monitor entire building from a single location.

EASE OF INSTALLATION
Can be installed in occupied office spaces with minimal disruption to occupants. Can even be installed without disrupting the existing HVAC system.

FLEXIBLE
As tenants and office configurations change, VRF system configurations can also be modified (within original design constraints) to meet the needs of new tenants.

COMFORT
VRF provides a comfortable work environment for all employees. Quiet indoor units and precise temperature control creates the most comfortable and productive work environment.

FUJITSU GENERAL (AUST.) PTY LIMITED

ABN 55 001 229 554

A Subsidiary of FUJITSU GENERAL LIMITED

www.fujitsugeneral.com.au

HEAD OFFICE

NSW:	Eastern Creek Drive, Eastern Creek NSW 2766	Tel: (02) 8822 2500	Fax: (02) 8822 2501
VIC/TAS:	Suite 1, Building 2, Omnico Business Centre, 270 Ferntree Gully Road,Notting Hill VIC 3168	Tel: (03) 9543 5899	Fax: (03) 9543 8299
QLD:	1 Breakfast Creek Road,Newstead QLD 4006	Tel: (07) 3257 2800	Fax: (07) 3257 2184
SA/NT:	128A Rose Terrace,Wayville SA 5034	Tel: (08) 8172 1180	Fax: (08) 8172 1190
WA:	Suite 3,5 Mumford Place,Balcatta,WA 6021	Tel: (08) 9240 5877	Fax: (08) 9240 5866

Email: contact@fujitsugeneral.com.au - or call 1300 882 201

ISO 9001 Certified number : 01 100 89394 ISO 14001 Certified number : 01 104 9245/01
Fujitsu General (Thailand) Co., Ltd.

ISO 9001 Certified number : 01 100 79269 ISO 14001 Certified number : 310102-UK
Fujitsu General (Shanghai) Co., Ltd.

ISO 9001 Certified number : 00608Q11061R2M ISO 14001 Certified number : 00609E20454R2M
Fujitsu General Central Air-conditioner (Wuxi) Co., Ltd.

N807

All products specified in this brochure comply with the Australian Communications Authority's (ACA) requirements for Electromagnetic

" AIRSTAGE " is a worldwide trademark of FUJITSU GENERAL LIMITED and is a registered trademark in Japan and other countries or areas.
Other company and product names mentioned herein may be registered trademarks, trademarks or trade names of their respective owners.

The colors may be different from the actual colors because this catalog is printed matter.
Product specifications are subject to change without notice.

Distributed by :

Copyright© 2013 Fujitsu General Limited. All rights reserved.

6OF003-1406E